



# LOGIC BEACH

Part I

exurb1a

# **Logic Beach – Part I: The Great British Polly Hunt**

Exurb1a

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## Introduction

Writing a book is rather like tequila shots. Fun at first, then almost immediately a horrific chore you barely remember starting. For that reason I have decided to release this book in parts. That way I can catch a breath before moving on to the next section.

I suspect there will be three sections in all, though since I haven't actually finished writing the third, I can't say for sure. My first two books were something close to careful architecture. This one is going to be more like gardening. So please do bear with me if you happen to enjoy this story. If you don't enjoy it, well, please bear with me anyway.

As ever (and even more applicably these days) I really couldn't have made this happen without your unrelenting (and frankly inexplicable) support. Those of you propping up my silly excuse for a career are saints as far as I'm concerned. Your support means the absolute world, and if I ever do have a firstborn and you ask nicely, you can have it. Or hang out with it a bit at the very least.

This story was written in hotel rooms, mostly, travelling around Bulgaria. You will notice Bulgaria features quite heavily in it. That's partly because it is one of the finest countries in the world, and partly because I've been living here a while and have fallen hopelessly in love with the people and the geography. A word of apology though: after several years I am still a stranger here. It's pretty bloody cheeky for some pompous foreign know-it-all (who barely speaks the language) to turn up and try to condense your country down to a few hundred pages. I hope you don't think that was the objective, because it wasn't. If some idiot came over to the UK and boiled it down to, "They drink tea a lot and do kissing weird," I think I'd be pretty annoyed.

What I'm getting at is that there will be cultural simplifications. If you're Bulgarian, please see if you can forgive me for that. It's just that the place is in my blood now and I wanted to write it a love letter.

Likewise, the physics in the pages ahead is purely speculative, probably too speculative. I have tried to keep as close to the status quo as possible, but I wrote some of it after a few drinks. However, the core idea is one I suspect might have mileage in it: Is the universe fundamentally logical, or isn't it? **Is physics an expression of a deeply rooted necessary geometry that could be deduced from first principles?** I have no idea, but it seems like a matter we should settle

one way or the other at some point. It would be nice to take steps towards nailing it in our lifetimes, if possible. I think so anyway.

Also, I shamelessly stole the idea of cosmic sociology straight out of Liu Cixin's trilogy, Remembrance of Earth's Past. It's a fantastic work of science fiction and I highly, highly recommend reading all three. I trust that admitting to plagiarism will make it seem more like very heavy adaptation. Or loving theft.

In any case, cosmic sociology is a really elegant answer to the question, "Where are all the aliens?" and I urge you to look into it.

As always, you're welcome to drop me your unfiltered outrage/disgust/diatribes at [exurb1achannel@gmail.com](mailto:exurb1achannel@gmail.com).

I enjoyed writing this one. I do hope you enjoy reading it.

All the best, as ever,

Ex.

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This one, with love, is for **Bowles** and the **Dog Wrestler**



## The End

He woke, only seconds old; bolted up. Panic.

A beach stretched before him and on the beach were objects, small and large, some made of what looked like slowly melting glass, others of metal. One was mundane, a cube. The rest were many-sided unfamiliar shapes.

A pretty woman was sat beside him.

"It's all right," she said and smiled kindly.

"The hell..." he muttered. He went to jump up but the woman put a gentle hand on his shoulder and rubbed.

"It's all right," she said again.

"What's going on?" He glanced out at the ocean. The water, he noticed, was made of shimmering geometric tiles. The sky was just as strange: cracked in places. The sand was covered in equations, some long, some short.

The woman put her head on his shoulder. She smelled like some exotic spice. And a little like home too, wherever that was. "There's nothing to be frightened of," she said in an accent he couldn't place.

"I remember..." he said and thought: *What? I remember what?*

"We don't have so long left," she said. She kissed his arm, then laid down in his lap. He tried to place her face.

"I'm dead," he said.

"No, nothing like that. Want me to explain?"

The face still wasn't familiar, but the pattern of speech was. He looked out to the equation-riddled sand and the plate glass sea and the fractured sky. Beyond the sky, he saw then, was a huge black mass on the horizon, pulsing like a lung. It looked hungry.

"I can show it all to you, so you remember properly," she said. "The grammar of everything. Do you want that?"

"Yes..."

And he remembered then, all of it, the enormity, sweet Jesus the enormity, too much to hold, past and present, future even, a warped echo, the scuttling little feet of the centuries, time too big to stare directly at, familiar, familiar – yes, I remember, what I was and what I wasn't, *ten thousand years* – more perhaps? Sweet Jesus.

He screamed.

"Don't you want it?" she said. "Is it too much?"



“Yes, yes...” He covered his eyes.

The memories were gone as suddenly as they had come on.

“All right then,” she said and rested her head against his. “Whatever you want. We'll just sit a while on Logic Beach. We'll just sit a while. Would you like that?”

“Yes,” he said in a small voice. “Yes, fine.”

## **The Beginning**

**1.**

*18/10/2021*

P,

What was I, 29? One night I went to throw something in the toilet bin and waiting there at the bottom was one of your used tampons, half-unwrapped. Maybe it should've grossed me out. I wasn't grossed out. It struck me as kind of holy for having been associated with you somehow. In that moment I decided I would make you my wife, or give it my best shot.

We weren't even living together at the time, but we moved in a few months later. I pretended to be reluctant. I wasn't, not really - just didn't want you to think you'd snared me too easily.

What then? We shared a bed, shared a bathroom, shared a toothbrush sometimes. You stopped wearing perfume so often and I stopped combing my hair. And slowly (though I can't point to exactly when) we gave up flirting down tin-can telephones and came out into the daylight of real living and took a good long look at each other and shrugged and went off into the future.

I reckon love is really confirmed in disgust. There comes a moment when the apple of your eye does something just absolutely hideous; rolls over to kiss you in the morning with Satan's breath, says something a little mean about you at a party while you're standing right there, leaves the stench of shit in the bathroom unsuspectingly. And that is when love is either born or stillborn. The propagandised lover you've been sleeping with suddenly turns into a real, shitting person. In that moment you either plot a path out of the arrangement or give yourself over completely. I saw your gross sides: drunk, pissed off, spiteful, lazy, jealous, scheming, self-absorbed; everything, I think. I liked all of it, even your morning breath.

Once, when I was young and dumb, my dad and I were arguing about whether we'd rather be smart and miserable or happy and ignorant. I said smart and miserable because I was a pompous dick back then. And he said, "What's

the point in any of it if you aren't happy?" That didn't make sense for another decade and a half until one night when you'd fallen asleep on the sofa and I got you up and helped you into your pyjamas and carried you to bed and watched you sleeping for a long time, just held you for a long time. You smelled like Christmas Eve. It was probably the most romantic half hour of my life and you weren't even there for it.

Now the house is doused in your smell in a way I've never noticed before. I find your hairs on the pillow and put them to my nose, but what's the use? Your coat still carries your perfume; I sleep with it sometimes. Stuff that was junk just a few weeks ago – snotty tissues you left on the side, crumpled notepaper, socks behind the bed, whatever – I collect them up delicately like the custodian of the Museum of Your Life.

It has been 151,200,81 seconds since you went missing. Two and a half weeks. I have decided to write to you, just like I did in the old days. And when you're back I'll give you these letters and you can tell me your side of things and I'll show you mine. It can't hurt, can it?

Bullshit aside I just miss you. God, I just miss you.

B x

## 2.

*Look for the man with air for a belly.* That's what they'd told her. Argie demanded a clearer answer. None was given. And so she walked.

Sludge treacled by in the gutters. The afternoon stank of death. Above, three moons were rising and two were setting.

*Look for the man with air for a belly.*

Argie did not know this part of the city. A hag wandered by in torn rags and eyed her with five pink pupils. The hag grumbled. Argie tried to smile and the woman went on her way. More wretches followed and passed, stumbling, gurgling, wild animal cries. They were heading middlewards, Argie knew, to the Death Forest where perhaps they would be lucky enough to die.

She wandered aimlessly a while, down backstreets, alleys, up spiral staircases. This district of the city was nothing but one enormous market, each street selling more bizarre commodities than the last: stolen mindpatches, fermion loops, timepass tea, even books.

A little boy appeared from an alley and stood before her, his arms outstretched. She bent down to him. His face was scarred and dirty. She checked his history. He was well over three thousand cycles old. Some little boy. She started back sensing a trick. Too slow.

There were fingers in her thoughts then, probing from behind. She tried to scream but paralysis had already set in. The boy watched her blankly. The fingers swam about through her top-thoughts, then wandered leisurely down to her memories.

"Yeessssss," the fingers said. "Ease into it. No harm. No trouble."

"Ease into it," the little boy echoed. "No harm. No trouble."

The fingers touched at her past as one might a museum relic.

"Complications in here," said the voice. "Complications indeed. Relax into it. No harm."

"No trouble," said the boy.

The fingers worked deeper into her memories, her early years. They quickened at that, excited.

*God no,* Argie thought. *God, please no.*

It seemed painfully stupid now, to go wandering through these streets without any security alongside.

*God no,* she thought again. *Please just no.*

The fingers probed further back through her selfsense, then idly flicked ahead. *The man with air for a belly.* The fingers paused.

“What business do you have with him?” the voice said.

No, Argie yelled inwardly.

The fingers busied in her recent history, precise now, peering into her time with the infant. Then they pulled back. Argie felt her selfsense under her control again and fell to her knees. All quiet in the street. The boy watched blankly still. Argie turned about to face her attacker and met eyes with an ancient hag.

“Follow the stream,” the hag said, pulling her hand back into her sleeve. “You’ll find the bellyless man at its end.”

“Stream?” Argie murmured.

The hag nodded to the rolling sludge in the gutter. Then she gestured at the boy and the two of them linked fingers and disappeared up an alley.

Argie wondered briefly at this strange mercy, wanted to yell after the hag, hurt her. Instead she followed the gutter down the street.

How much longer did I have? she wondered. The old woman’s fingers in my mind, seconds perhaps before everything went porridge. What are they always looking for, these awful fucks? Either they do it for pleasure, or with purpose; both equally terrifying.

The gutter followed the street faithfully. The moons were setting now. Peddlers yelled out to Argie, proffering five-dimensional fruits and Christ knows what. She was too exhausted to even acknowledge them.

The market began to thin out but the gutter continued. The folk grew more warped, too many limbs or no limbs at all, eyes and ears where eyes and ears should not be. Many of the figures were barely recognisable now, some animals, some just animated skeletons shuffling about with carriesacks and boxes, some protruding from hyper dimensions and peeking into 3D space with just their heads or arms.

The gutter spiralled around and down, the streets shrinking with the incline, the houses built at forty-five degrees and the sludge flowed fatter alongside. Above, the sky receded behind the buildings until only one moon shone and then that was gone too.

At last the sludge flowed beneath a wooden house and vanished. There was no way around. She knocked on the door. A clatter from inside, footsteps, then a little telescope shot out from a panel in the door and scrutinised her.

“Yes?” came a muffled drawl.

Argie put her face to the telescope. “I’m after some help.”

“No help here. You’re lost. Off you go.”

“Please, you’re The Navigator, aren’t you?” She squinted into the lens.

“No time for games. Fuck off,” the reply came and the telescope receded into its nook. The footsteps sounded again, fading.

Argie constructed a packet of selfsense, enough to communicate her recent history – the story of her and the infant, as much as she could fit into a digestible format at least. She propelled the packet through the door. The footsteps paused a long while. She eyed the sludge again. Gelatinous and black, the stink unbearable.

The door pulled back. Behind stood a sapien-looking old man wearing nothing but a pair of ripped black shorts. His face appeared cracked like stonework. A cigarette dangled from his mouth, more ash than tobacco. His stomach was missing.

“Your stomach is missing,” Argie said.

“Very astute of you, I’d hardly noticed. Was that packet yours?”

“Yes.”

“Inside,” he grumbled.

He turned and led her in. She bent to peer between his ass and his torso. Only air.

The corridor twisted and they came on a living room with a dream fountain still turned on. It spat out plumes of gold and purple, shapes occasionally forming, then washing back into chaos: frogs, passenger planes, planets.

The old man lit another cigarette and stared into the device and smoked.

“Dream fountains will melt your mind, you know,” Argie said softly.

“Mine to melt. The selfsense packet, was it genuine?”

“Yes. Can we turn that thing off?”

The man shot her a dead glance. “No.” More silence followed. She peered through his torso again. “How did you find me?” he said.

“A rumour.”

“*Look for the man with air for a belly,*” he croaked.

“That’s the one.”

“Bastards, they only spread it around to annoy me. Send the world and his fucking wife down here at all hours of the day.”

The dream fountain took on a red hue. A dragon formed for a moment, roared fire, then evaporated. The silence held out. The old man didn’t seem to mind.

Argie had heard of these machines, dream fountains - reading one’s selfsense and spitting out some distorted representation. As the user watched the pictures, the fountain read the perception of itself being watched and distorted that too, the feedback loop intensifying. The result was highly addictive: a dream in broad daylight.

“I’m Argie.”

"I know."

"And you?"

"What have you brought with you?"

"What?"

"Payment. For the job. You came looking for a guide, yes?" Argie stayed silent. "Don't play stupid. No one seeks me out for a chat. You tell me where you want to go. If I'm willing to take you, there better damn well be payment for it."

"Turn the dream fountain off and we'll talk."

"If the device offends you, feel free to leave," the old man snapped. A cool wind blew through the house. The fountain turned a scarlet red. Eddies pooled and warped. The figure of a little girl appeared within a whirlpool.

"Who's that?" Argie said.

"No idea," The Navigator muttered. "Those are your thoughts, not mine."

All quiet for a time, then Argie said, "I'll get you home."

The old man turned on her and finished the last quarter of the cigarette in a single drag. "Think you're the first to try and fool me with that?"

Argie gifted him another selfsense packet: a six-dimensional proof of her tier privileges. The dream fountain faded to blue and powered off. The old man waved a hand and a sofa pressed into Argie and sat her down. He took his own sofa and lit another cigarette. "Start explaining. Now."

"It's complicated. I have tier privileges, I don't know why. They work. I mean, I haven't used them, but I asked an Indigo to examine them once and he said they're genuine. Anywhere I want to go I can go, even the Glass Castle in theory."

The old man stared, perhaps checking the packet again. "You don't know *why* they work?"

Argie shrugged. "You know how it is."

The old man shot a look back suggesting he did not. Then in a gruff voice he said, "Tell me how you'll do it."

"I need passage up, to--"

"No," he barked. "Tell me how you'll do it first. I've had enough of daft lies. Hell, they promise me everything and deliver nothing. Tell how you'll do it or you can just get out."

"My signature is valid all the way up to Indigo tier, I told you. They'll let me and a guest in. I'll take you."

"Then why don't you just go by yourself? Why bother coming here?"

"I could do with someone who knows the way."

"Hm." He regarded her through the smoke. "I normally take payment in



advance.”

“Not today. When we get to Lemuria you can do me in if I’m lying.”

“Oh,” the old man purred. “I’ll make hell worse than that.”

The dream fountain hummed gently to itself, inactive. Now the room was in a half-light murk and a fat quiet settled over the two of them.

The old man snapped his fingers. A mechanical spider entered bearing two glasses of purple liquid. He took one. The spider scuttled over to Argie. “I like keeping a clear head,” she said.

“If you can’t provide a downpayment then we’ll at least drink to it.”

Reluctantly she took the glass, sipped. Timepass tea.

“I’ll tell you what makes me cautious, shall I?” the old man said. Argie shrugged again. Figures crawled past the window, slowing already. The tea was working. “A strange woman shows up at my house with stolen tier privileges.”

“I never said they were -”

“She demands I take her up into the high tiers. And she expects me to put my life in danger for the sake of some vague promise of returning me to my homelands, says I can kill her should the arrangement not go as planned. Meanwhile Indigos have been coming down here for the last thousand cycles asking after me, sniffing about. Gets one cautious. Makes one careful.”

“It’ll be an easy journey, I promise. You saw the selfsense packet. The memories are real.”

“Talk is cheap. Memories cheaper still.” The old man finished his tea and lit another cigarette. “You could’ve faked it. Give me a look around your selfsense.”

“That already happened once today against my will. I don’t feel like doing it again.”

“Then the deal’s off.”

“Did you even listen to what I said? I’ll get you out of *exile*. Fine, stay here another billion cycles. No one will offer you this again”

“I’ve been offered better than that plenty of times before. It’s never more than a bluff.”

Argie finished her tea. This was why the old man had given the drink to her, she realised now. He would never take her on her word, or even on apparent selfsense packets. This was how they did it, the professionals, or so she’d heard: slow time to such a standstill that one could go wandering in another’s memories, experience them in real-time if so desired – and still be home in time for dinner.

The denizens beyond the window were almost completely still now. The air appeared solid, dust motes fixed like pocks in space. To anyone looking in, the two of them would appear little more than wild blurs, such was the time difference.

Argie sighed. "Go on then, before I change my mind."

The old man stared, amazed. "Really?"

"What other choice is there? You won't trust me otherwise, will you?"

"No." He didn't hesitate, stubbing the cigarette out and waddling over. "I shan't peek at anything I shouldn't."

"Just get it over with."

He nodded.

The experience was not unlike the hag with her fingers, only the old man did not touch her and this time a consent request came first. Argie accepted. The old man entered her selfsense.

He paused uncertainly like a tourist, then took careful steps inside. She felt him peering at her memories of the day already, of the hag, of the little boy, of her passage through the inner city, all the way from her home burrow.

And then he reached back through time, through *her* time. Argie flinched.

"Does it hurt?" he said.

"Go on."

He walked leisurely back through cycles, ten, twenty, thirty, and stopped where she knew he would. At the birth of her daughter, the scene she had thrown through the door at him.

He watched the memory from afar, almost as a supervising father.

Argie was younger, wearing different skin, a different face. She had come to Nufeeja. The place was abandoned. Who has children now after all?

"I am here as agreed," she yelled out.

Nufeeja boomed back, "You are here as agreed."

The machine itself was almost conscious, straddling the fine line between creative and sentient. Some Indigo must have spent cycles engineering it so.

"What kind of infant do you wish to bear?" the machine asked.

"Random permutations," Argie said without pausing. She had thought this over many times. "Take facets from my selfsense and inject them without design. Use discretion. Make her fairly passive though please."

"*Her*?" Nufeeja said.

"Yes. She's to be female."

The machine said nothing at this. It was unusual enough that Argie had committed to a gender herself, but to bear a gendered *infant*?

"Has the process begun?" Argie called out.

"It has. Come back in a quarter cycle."

"I'd rather stay."

"As you like."

A rumbling sounded from beneath the ground. Great neon spheres shot up

and whirled about, zipping between the clouds. The sky tinted a softer blue. This was nothing more than a spectacle of course; the process could just as well be done silently and behind the scenes. Still, Argie appreciated the effort on the designer's part.

Most denizens had told her not to come to Nufeeja. On those rare occasions when the process actually worked, the infants turned deranged soon enough. On the other occasions they didn't live long anyway: did themselves in.

The spheres were joined by others, totalling in the hundreds now. They span at a dizzying speed, blurring into a single ring of brilliant white, rivalling the suns.

Argie thought of some distant memory of a trinket or spinning toy, though couldn't place the thing in time.

Then the machine said, "The procedure is complete."

The spheres stopped suddenly, hung in the air and amassed into a single ovoid and descended to the ground before Argie. The ovoid disintegrated slowly. Inside, Argie saw, was a selfsense without physical form. The mind was energetic and confused, twisting in five dimensions, then two, then eight, trying to find its footing.

"It's all right," the birthing machine said. "Go on."

Argie stepped closer and extended her selfsense towards the new mind. "Hello," she said softly.

The new mind paused in its flurry, regarded her. Then finally in a voice that was not a voice it said, "Hello."

"I am your mother," Argie whispered.

"I am your mother," the mind echoed.

"Give it time," Nufeeja said. "This one was an especially complicated recipe. She'll settle down shortly if she's going to at all."

Argie assigned herself with the tag *Mother*. She gifted the new mind an *Infant* tag. It was accepted.

"Go on," Argie said. "You can wear it if you like. Everyone will know who you are that way."

The mind twisted wildly again and shot at Argie, lapped the limits of Nufeeja, and settled back where it had started.

"I am your mother," Argie said again.

The infant seemed to be thinking about this. Then it said, "I am your mother."

Argie let out a little sigh. "Was there a problem with the procedure?" she called out.

"None," Nufeeja replied. "She doesn't yet know her voice from her thoughts. Too many variables. Sentience only emerges in rare cases. In most attempts, it

does not. It's likely the process was a failure. Apologies.”

“Mmm,” Argie mumbled. She forged a transport link to her home burrow and the request was granted. A portal appeared. She held out a hand to the wild selfsense ahead of her.

“I’ll take you home,” she said. The selfsense looked the hand over, then looked Argie over and said nothing. “Take my hand. That way we can both travel together.”

“Travel together,” the infant repeated.

Argie reached into the new mind gently, browsed. The interior was a mad storm, mental components flying all about, no linkages or associations. The thing would never cohere. She would never have a daughter.

The birthing machine was old and stupid, addled like the rest of the almost-sentient devices. Would shutting the infant’s mind down amount to murder? It wasn’t aware of itself, it never would be. No one could begrudge her such a mercy.

She pulled back, a defensive response lest she get stuck inside this strange selfsense. She felt herself recede emotionally too, imagining the cycles ahead of remembering this failure. She would not tell the other denizens. She would not give them the satisfaction.

The birthing machine watched silently.

Argie went to initiate the *eradicate* command. She took a last look at the new mind.

“I am your mother,” she said, barely louder than a whisper.

The selfsense listened and did not respond. Argie didn't try to suppress the regret. *Stupid, stupid, stupid*. How could she have been so stupid? All the accusations were correct: *arrogant, romantic, misguided*. She would return to the Ape Cellar alone and stay alone.

Then, without warning, a face formed in Local Space, projecting out of the new selfsense: pale, green-eyed, that of a little girl. The pupils focused on Argie’s face. The cheeks rose and fell. The mouth opened and closed. The face settled, smiled.

“I am your mother,” Argie said again.

The reply was unsteady, cycling between tones, but audible nonetheless. “And I am your infant.”

3.

28/10/2021

P,

11 pairs of shoes.

40 pairs of socks, assorted colours.

211 books, mostly fiction.

7 lipsticks.

2 laptops, both in working order.

4 digital storage sticks.

2784 MP3 tracks.

1 unopened bottle of champagne from your thirty-third birthday.

2 sex toys.

3 hairbrushes.

9 dresses.

4 pairs of trousers.

2 pairs of shorts.

16 t-shirts.

1 unopened bottle of sexual lubricant.

3 jumpers.

7 coats, various lengths.

2 love letters from ex-boyfriends.

1 Leonard Cohen CD album signed by Leonard Cohen himself.

Assorted jewellery: earrings, necklaces, bangles.

1 urn containing your sister's (Svetomira Alexandrova) ashes.

And 1 packet of Marlboro Fine Touch cigarettes and a lighter, hidden at the top of the wardrobe.

This is your skeleton. Everything you own in our house. I've stacked it all in the study, washed the clothes, dusted off the books. I just couldn't stand to look at it all anymore.

I explained the entire situation to the cat. She listened intently and without comment.

While I was tidying up I found some of your old love letters and read them.

Sorry about that. You know how good my Bulgarian is, but Google Translate helped. You should've hidden them better. Glad I didn't meet your ex-boyfriends though. They sound like right dicks.

Emma came over this evening. I think she wanted to make sure I was all right but she just ended up crying and I gave her a cup of tea and some tissues. Then she got angry about how the police should be doing more. I said they're trying their hardest. Maybe they are.

Went into the museum yesterday. Everyone was super nice and we avoided the elephant in the room. John said I could take as much time as I needed and that they wouldn't give my desk away. I found a little note in my desk drawer you'd left in my lunchbox a few months ago. "If the bastards get you down just remember that you're still my favourite human." My eyes got a bit leaky.

That was one of your few open acts of affection. I really hope you don't mind me saying so. It's going to get worse.

I missed you for the first few weeks. Now I feel a bit more objective about it all. I can see the good and the bad. There were things about you that really, really pissed me off. You made me angrier than anyone I've ever met, especially with your godawful Eastern European coldness. I thought Brits were bad. You do this thing when you're angry, attacking anything I say, even if it's an apology, even when I shouldn't be the one apologising. Or you just disappear off with a friend without telling me where you're going. Or go to bed without saying goodnight. Do you know how that shit feels?

And what then? The sky clears and you come back to yourself and we joke a bit or screw and you're fine and not a damn thing is explained. Everyone thinks you're so straightforward and rose-coloured spectacles, even Emma. They don't know all your bullshit like I do. They haven't spent a day trying to work out if you're fucking someone else, just because you were so annoyed about me not sticking up for you in an argument that you took off for a night to some hotel. I would never do that to you. I would never *dream* of doing that to you.

How far we've come though, huh.

You were twenty-five. I was twenty-eight. I'd flown to Sofia for a conference on Thracian burial rituals. I hated the city immediately. All the weird monuments and the smoky bars and the same buildings over and over again, hideous communist atrocities on the skyline in every direction. I went and got plastered at some Irish bar in the centre and the place was full of dickhead foreigners who couldn't function in their own country so they'd come to Eastern Europe to try at being celebrities. They called last orders and I walked back to the hotel. There was an email waiting from my secretary at the museum back home. "Guess you made a friend," it said. Attached was an online article from a small Bulgarian

newspaper. The secretary had run it through a translator.

“...and not to mention dumb eyes come over with their judging. In particular, new to the city, Benjamin Hare, British archaeologist. Why are under-qualified and foreign archaeologists coming over to dig up what is rightfully Bulgaria's? Why is the legacy of imperialism flirting even with archaeology now, with our history?”

I got into bed, read it again, and looked up the author on social media – Alexander someone or other. Just as pretentious in pictures as in writing: endless photos of him at rallies, holding placards, looking thoughtfully at books. Blatantly affiliated with all the nostalgic communists still in the country at the time. Not old enough to remember the Berlin Wall coming down, evidently. What a lovely thing utopia is when you were too young to remember the horror that came with it.

I sent him a direct message. “Hi. I’m the capitalist pig come to ruin your country. Since Bulgaria prospered so wonderfully under the protection of Russia, I can see why you’d want to restart the communist project. What harm did it ever do to your people? Besides utter tyranny. Thanks for the mention online. We’ll have to meet up for a drink sometime, I’m sure it’d be just lovely. Good luck ever being taken seriously, Ben.”

I woke up hungover the next morning and went walking through the city for a bit. Actually it was quite lovely, I decided – forests and parks in unexpected places, the men handsome, the women gorgeous, sidestreets brimming with improvised art. I bought some cigarettes for the first time in three years and had a smoke sitting on a monument somewhere near the main university.

An email came in, a reply from the author of the article. No pleasantries, just: “Tonight 7:30,” and a map location, a bar a few miles away from my hotel. I had dinner somewhere, I forget, went back to the hotel and put on the plainest clothes I could find and tried to look as unkempt as possible. Found the place easily enough.

The bar was full and loud and I thought about turning around. A group was sat on a bench outside smoking, already half-cut. “Dr. Hare,” someone called out, a guy in his late twenties with a head like an egg. He introduced himself as the author of the article.

“You’re uglier in real life,” he said.

“Thanks. I only came here to tell you to go fuck yourself. So, go fuck yourself.”

“Great. Is that everything?”

I stood without moving, unsure what to say next. The music blared from inside. Dick-features nodded to the table. A drink was already waiting for me. I



sat down.

No one else at the table seemed to mind me being there. Dick-features knew quite a bit about my research already and asked a few basic questions. I told him all about the burial research grant and the renewed EU interest in Thrace and all that and he listened for a while, then interrupted with some dumb rant about the EU taking advantage of smaller countries. The rant continued into the five-minute mark. His friends stopped talking and turned to listen and he raised his voice. I realised I was not there as a nemesis, but an ear.

“...just another example of someone less skilled coming in and taking a good Bulgarian academic's job and-”

“Are you going to let him speak, or just talk him to death?” said a girl from the other end of the table. Dick-features betrayed a small hint of shame. The girl was absurdly beautiful, to me anyway. Pale, dark-haired, freckled, the kind of eyes that were totally unreadable. Her accent was thick but more out of apathy than lack of practice.

“Umm,” I murmured. “I get it. There are plenty of good archaeologists here. But look, this is my speciality. I'm the only foreigner on the project at the moment. Any findings will go straight to the Bulgarian government.”

“Why are you interested?” dick-features said.

“Well...” I started.

“He doesn't think they're burial mounds,” the girl said. “Not enough human remains were found inside. He thinks they're part of some other religious ceremony.”

“Right,” I said. I watched her out of the corner of my eye. Obviously she'd read one of my papers. I wasn't used to Brits doing that, let alone a Bulgarian. “The mounds and tombs don't follow a set design. You'd expect them to if they're just for burying the dead. Something else might be going on.”

“Like what?” dick-features muttered. “Aliens?”

“Probably not aliens, no. Something unusual though.”

“Well great. You must be so much smarter than us stupid Balkan peasants. Thank god you-”

“If you'd actually bothered to finish your MA, maybe you'd have the funding instead,” the girl snapped at dick-features and switched to Bulgarian for a minute or two and delivered what sounded like a fairly stern demolition of his character. The language was actually quite lovely-sounding, I decided. Dick-features said something unpleasant back, then went inside. The conversation returned to normal and everyone stayed in Bulgarian. I sat there for a few minutes feeling wicked uncomfortable, invisible suddenly. Then I finished my beer and stood to make back to the hotel. The pale girl came around the table and took dick-

features' place, introduced herself as you.

"I don't think you're right, but your working is good," you said.

"Cheers."

Your eyes were still unreadable, but intense as hell. They didn't waver or wander off while you spoke, just tore in like little brown hooks.

"I'm sorry about him. Don't take it personally," you said.

"It's fine. You read my paper?"

"Enough to get the idea."

"Why?"

"They were all bitching about you. I wondered how bad it was. I didn't think it was so terrible."

You were a mathematician not long out of your PhD, working in geophysics at the time. Brain circuits kicked in, the ancient ones – trying to work out if you had a boyfriend, trying to work out if you were taking more than an academic interest in me. You and dick-features had dated a while but his drinking became a problem, you said. He came out briefly, noticed you in his spot, and stared daggers at me. So that felt pretty good.

Four beers in and you developed a halo. You knew as much about Copernicus as you did Rammstein, liked David Lynch, hated astrology. I sensed an education was coming.

Which was exactly what I got. Your friends went home around one and we stayed up until the next morning. You drank me under the table. The witty ripostes died off in the first few hours and we turned to arguing about politics. I decided you knew your stuff, and perhaps not all of it was posturing. Just the vast majority. Marx was smart, you said, but shouldn't be taken literally. Engels was clunky and outdated. Emerging digital technologies would bring about a resurgence in communism and do away with all the bureaucracy. And so on and so on and so on...

You took me down backstreets, to bars needing passwords for entry, to restaurants open all night, to nightclubs where the music worked in polyrhythms – Balkan stuff, and most of the alcohol was strong and unfamiliar. Every street had some historical significance. This is where so and so was shot. Whatever her name was lived and died in that apartment.

Maybe it was the context or the alcohol, I don't know – but the city swam into proper focus. It was bearable, even likeable. No, I loved it.

You wouldn't reveal anything personal whatsoever, just parried the question and changed the subject. Talk of how capitalism might not be the worst thing in the world was met with an eye roll and a rant about some angry Slovenian philosopher. So that's how you knew dick-features and the others, it turned out.

They weren't all archaeologists, they were communists, the new digital sort who went to meetings in shared workspaces and still bought coffee from Starbucks when no one was watching. Back then I had no idea communism was largely unpopular with the Bulgarian youth. Your crowd was more niche than I realised, you especially.

I tried to hold my tongue but booze got the better of me. Right, I said, and what about the millions of people communism killed last century?

Oh, you said. That was people, not communism.

Right. Okay.

Besides, you said. If you want to use that argument, what about the millions of people capitalism killed with its oil wars and sweatshops?

I sensed a trick was in progress but couldn't tell what it was. This is how people are convinced by new ideas, I decided. Not with logic and decent arguments, but by someone being pretty and compelling enough, or sufficiently older than you, or smarter, or wiser. What dumb monkeys we all still are, huh. And I was yet another one. I caught myself agreeing with your position now and then. That was the beginning of the stripping of my foundations.

By sunrise we weren't being all that nice anymore, but sweet Jesus you were beautiful; the streetlights colouring your cheeks a dirty orange and bringing out your dimples. We sat by the National Palace of Culture and drank beer after beer after beer. The sky was radioactive pink and the city was deserted. All ideals were possible in that hour. The future was Lego pieces waiting to be snapped together into something infinite and perfect that would never hurt or get boring.

"That was fun, see you around," you said suddenly and strolled off around seven. No warning, no mention of needing to be somewhere, nothing.

What had I done wrong? I should've ribbed you more, I decided. Towards sunrise I'd started agreeing too much, letting my guard down. You got off on adversity. I realised that back then already.

All your heady political stuff had been charming the night before, but the second you left it just made me angry. I liked you too much already.

I wrote a sarcastic email the next evening inviting you out again in a sort of roundabout way so it didn't sound desperate. I deleted it after some thought. No, fuck it - I wasn't going to be pathetic.

I flew back and worked my arse off for the next six months and thought about you maybe a few times. I found you online and followed your research. The parts I could understand were certainly interesting enough, using a new type of ultrasound to map out ancient buried structures, then modelling the results with a clever algorithm of your own creation.

One day dick-features wrote a particularly inflammatory article about how

the European Union was pushing its anti-human agendas in the form of money lending. I signed up for an account with the newspaper's website under an alias and wrote something like, "If you don't like it, feel free to leave. We won't miss you."

The next day you dropped me an email after following the comments section, I guess: "Still sucking Adam Smith's dick, I see."

"He had nicer hair than Stalin. You knew it was me?" I wrote back.

"Obviously. Are you back in Bulgaria?"

A moment to plan a strategy. Then a small geographical lie: "Yes."

"Want to trade insults?"

"Yup."

I booked a flight for the next morning.

We didn't do unpleasant pleasantries that time around. I went to your place.

You were infinitely more reachable in bed than out of it. Clothes off, you made passing remarks about your family, about your overbearing mother and your political father. No surprise with the latter. You even asked me sincere questions about my life once or twice.

I went out to get coffee and those weird rolls with spinach you all eat and we had breakfast in bed. No talk of Marx or Engels.

You took a nap on my arm. I smelled your hair a bit. Jasmine and some exotic spice. My stomach was full of jostling needles. With great disgust I realised I was happy.

Out the window and the streets were grey and the paving slabs were muddled. The taxis violated every traffic law competitively with each other, it seemed. The mountain watched the whole scene from a reasonable distance. I had fallen in love, I decided, with this unlikely city. Like loving a woman, it wasn't something in particular that sent one over the edge. It was a conspiracy of many factors that by themselves were unremarkable, even ugly sometimes. But together they fit seamlessly into a beautiful geometry, the kind of geometry that had been waiting there all along; grey streets, muddled slabs, all of it. And below all that in Sofia, amid the people, in the culture, waited a bubbling and old appreciation for classical art, for honest love, for arguments in the street, for beer. This was not England. It was something realer and weirder and far more gorgeous.

And there was you of course, lending your sheen to everything. I was afraid suddenly, afraid now I knew I was reliant on you staying in my life.

That point, that minute, was the beginning of the good days, of still thinking of each other as fun enigmas, when everything had a wisp of mystery to it. I started flying over every other week. We learned the language of each other,

slowly, and I tried learning your country's language too. (Gendered numbers: yes, that seems like an entirely reasonable way to construct grammar...)

You would only answer personal questions on your own terms, when you decided. You preferred screwing in the morning to the evening. You adopted a street dog when you were little called Venera, but she was run over a few months later. You told me you had no middle name but this was a lie and it was Boyanova. Just before you fell asleep, you'd sometimes tell me you loved me. This was on very special occasions, but I waited in anticipation most evenings anyway.

Like all your stuff left behind in the house, all your mannerisms are here too: how you made your tea, hung your coat, blew your nose.

Did you leave me, Polly?

If you left me, fuck, just write and say so. I'll cope somehow.

But this. This is unbearable.

B x

#### 4.

The Navigator pulled his selfsense out of Argie.

“There’s more,” she said.

“I’ve seen enough.” The timepass tea had started to wear off. The world was moving at a normal pace again. “So, your daughter ran for the hills, did she? Did a bunk like all the other infants?”

Argie stared at the sleeping dream fountain. “Something like that.”

The Navigator lit a cigarette. “They’re not like us, the new infants.”

“But she was made from my selfsense.”

The Navigator shook his head. “That really doesn’t matter. Think about it. You’re an Original Migrant. You might not remember coming in here-”

“I don’t.”

“And neither do I, but something persists in us, deep down in the selfsense. Something left over from the sapien days. These *manufactured* infants, they’re made fresh. No monkey tendencies hiding down in their psychology. Your infant escaped to the upper tiers, didn’t she?” Argie nodded. “Same as all the others. They stick around for a while, try to make the best of it. But imagine all the stories they hear about Lemuria, or Indigo. If someone told *you* about heaven, wouldn’t you want to go? And that’s why you want to travel up-tier, isn’t it? To find her.” Argie went to speak. The Navigator put up a hand. “I should tell you that even in the unlikely event we *do* find her, she won’t come back with us. You understand that don’t you?”

“I’m her mother,” Argie said quietly.

“And what do you think that means to her now? Fuck all, I guarantee it. How much allegiance would you give to a germ? That’s what we are from her perspective these days.”

“And what do you know about it?”

“More than I’m comfortable with. You’ve never been to the upper tiers. You can’t imagine how it is up there. They’re building heaven.”

Heaven, Argie thought. A sapien concept: the promise of eternal life beyond death. Only natural that their descendants should actually try to build the damn thing. “If you were in my position you’d do the same,” she said.

“If I was ignorant, yes. Unfortunately I’m not.”

A pregnant silence held out. “Are you Indigo or Lemurian?” Argie said finally.

The Navigator turned to her with tired eyes and his entire body seemed to give up its rigidity and he dropped the cigarette into the ashtray, still burning. Then in a gravel voice: "My deep history is gone, same as yours. All I can remember is patches of Indigo. I lived there a long, long time. I've heard what you lot think of it. You're not always wrong. The denizens up there eat music and smell light. Sometimes they merge their thoughts. Other times they spend a thousand years alone in burrows of their own making and bury down into some mathematical problem without distraction. Time moves at least a factor of ten faster than down here. Plus, whole sectors are made up of denizens too altered to reintegrate with the general population. They've cut out their language faculty, or supercharged it; expanded their selfsenses, or shrunk them. Some spend a thousand years as a stone or a nebula just to find out how it feels."

"How can anyone be a *nebula*?"

"Have you given even a second to thinking about what *you* are, really? On a fundamental level? Everything is beyond comprehension when you get deep enough. Nebulae are the least of it. I did my time among the stars as a red giant, a white dwarf. I spent a century as an ocean just to know the land. I spent a century as the land just to know the ocean. I met my lover in the atmosphere of a gas giant. We spent millennia in its eddies. She was exotic, even for an Indigo. She only spoke in light. It got me curious about modifying senses, so I chose that path. There are surgeons up there, you know. They'll turn you into any creature you can imagine, cover you in a thousand eyes, ten million arms."

"Yet here you are down here, in the Ape Cellar..."

"Even paradise has its rules. One in particular will get you kicked out without hesitation. My lover and I grew curious about fully merging our selfsenses into a unity. True love, *ha ha*."

"How?"

"Don't ask me about the specifics, it's complicated, but certainly theoretically possible. Plenty of Indigos have tried. Both selfsenses are merged with one another, memories, inclinations, aspirations, all of it. That's the idea anyway." He let that settle.

"And?" Argie said.

The Navigator sighed. "Whatever runs Indigo has eyes everywhere, it seems. The procedure was detected before it had even begun. Immediate exile. And so here I am in this primitive toilet of a tier. They took most of my memories as penance; my lover, all of it. Her face is gone, her name too. It's closer to trying to remember a dream now. Every day a little more of it escapes me."

"That's barbaric. How can they-"

"They do what they like. I knew the rules. *Enjoy paradise*, they said. *Just*



*stay away from the fucking apples.* We heard their warning and still ate from the tree. They're worried about the *death of individuality*, I suppose. Imagine if they all merged. It'd be the end of Indigo. Probably the end of the whole of Arcadia too, given long enough." He tried to smile cheerfully. "Still, a little of my time there is with me. Enough to remember how to get around."

"I'm sorry," Argie said gently.

"Likewise," The Navigator replied. "Because you won't get your daughter back, however hard you try. If you can accept that before we dive into all of this then it'll be much easier when it heads south."

"So you'll take me?"

"I'll take you, but only so you can let go. If we even find her she'll be unrecognisable by now. Ah, but you think you know better, eh?"

Argie said nothing, only looked out of the window. The moons were setting. Beggars and wild beasts alike shuffled along the street. She thought of that day, the first day of the infant's life.

"And I am your infant," the child had said, there in Nufeeja with her pale face and green eyes. Argie thanked the birthing machine and took the infant home to her burrow. The infant seemed to like it, lying on the beach for hours, gazing at the stars. Soon enough, as her selfsense cohered, she grew a body and behaved as Argie assumed a sapient child would. The little girl learned fluent speech in minutes when she finally decided to. Then she began to ask questions.

*How big is our burrow?*

As big as we need it to be, Argie said.

*What defines its limit?*

Nothing. We could keep walking forever if we wanted to.

*Then is it infinite?*

No, it will just generate random land configurations ahead of us as we walk. Does that make sense?

*I think so. Are there other burrows?*

Yes.

*How many?*

Billions on this tier at least, one for each denizen. It's like a house. No one can come in without an invitation. That's just the Ape Cellar though. I don't know how they do things on other tiers.

*What's a tier?*

A bit like what sapiens called a 'country'. The place one lives in, depending on how they want to live.

*What's this tier called?*

Everyone knows it as the Ape Cellar.

*Why?*

Because we live a bit like sapiens used to, down here. We use speech to communicate and choose to feel hunger and thirst and all the other desires they enjoyed fulfilling.

*Can we get rid of those things?*

If we wanted to, but usually we don't. Here, try this. It's called a banana.

*Mmm, it's all right. Do they eat and drink on other tiers?*

I'm not sure, darling. Probably not. They're strange folk up there.

*How do you know?*

I've heard stories.

*Can we visit them?*

One day if you like. First we have to make sure you're secure and sound here. Outside our burrow there are some strange folk. I'll keep you safe, but you always have to do as I say. Understand?

*Mm.*

Do you understand?

*How do we get to the other tiers?*

We'll learn about that later.

*What's an Original Migrant?*

A denizen who started as a sapien, then migrated inside Arcadia.

*Am I an Original Migrant?*

No, you were made by Arcadia.

*How?*

It's complicated. Let's do that one tomorrow.

*Were you a sapien?*

I suppose so.

*What was it like?*

I really don't remember.

*Why?*

Only a few days ago you started as a jumble of numbers. Would you really want to remember that?

*Yes.*

And on and on in that fashion, question after question until the infant learned to interact with the burrow interface and got her information that way.

"Did you know," the infant would say, "that they don't speak up in Lemuria? They just think."

"Fascinating," Argie would reply, and change the subject.

For the first few weeks the two of them slept on the beach, but soon the infant

requested to edit out sleep altogether. Her mother reluctantly agreed, but did not do the same to herself. Sleep was pleasant. Dreams could be educational, occasionally.

One morning the burrow's alarm sounded and Argie jumped from the sand. *Fatal topology error*, the alarm screeched over and over. The infant wasn't in sight. Argie turned the gravity restrictions off and flew over the island, looking for the girl. The problem was obvious the moment she passed over the mountain. On the far side of the island the ocean had disappeared. In its place stood a twenty-six dimensional hypershape of some kind, twisting and warping, already towering over the island and growing at an obscene speed. The sky was flickering in distorted patches. The burrow was bending back on itself, coming undone. The infant stood below on the beach, marvelling at the thing. Argie wasted no time and eradicated the shape immediately. She flew down to join the infant on the sand.

"Are you completely mad?" Argie yelled. "What did I tell you about exotic dimensions?"

"I knew what I was doing."

"Another few minutes and that thing would've destroyed the entire burrow. The Ape Cellar can't handle hypershapes, I've said this a thousand times. *A thousand damn times*. What in hell's name were you thinking?"

The infant scowled. "I knew what I was doing."

"Anything but." An interface window was lying open on the beach, 20<sup>th</sup> century history. "You've been reading about Kaluza?"

"He was a sapien mathematician who-"

"I know damn well who Kaluza was," Argie shouted. She sat down, exasperated. The infant joined her on the sand and stared blankly out into the distance. The ocean was slowly returning where the hypershape had been. To think, just a few more dimensions and the thing would've started infringing on other burrows, tearing them apart. Who knows what could've come after that.

Creatures flew overhead, a sign of the burrow resetting. Turquoise dragons barked. A randomly generated spacecraft lowered itself down onto the water in the distance and disappeared beneath the waves.

"Sorry," the infant whispered.

Argie was quiet for a while, then put her arm out. The infant leant into her mother and the two of them watched the ocean. "It's all right," Argie said. "All I ask is that if, *when*, you feel like experimenting again, just make sure I'm there, okay?" The infant nodded. "You're not a prisoner here, but the world is complicated and strange, and you can't just go bounding into stuff like hypershapes without knowing what you're doing." The infant nodded again. The

burrow had returned to its normal state, the ocean a little purpler than before perhaps, but all else the same. “You like Kaluza?”

“I do,” the infant said.

“Well, we still haven’t named you. Kaluza. Rolls off the tongue. How about it?”

“Kaluza...” the infant said.

“Kaluza it is, I think.”

The infant hugged her mother tighter. “Kaluza,” she said again.

The Navigator watched the smoke from his cigarette curling up in a twist. With a flick of his hand it took the form of a DNA double helix. “It’s endearing that you choose to stay so sapien,” he said.

“There is something essential in it that the rest of you have forgotten,” Argie replied.

He snorted. “War and jealousy. Yes, fine things to look back on. Oh, if only we could hang onto them forever.”

“You wouldn’t understand.”

He turned to her and his body took on a luminous quality. His tags were muddled, displaying infinite size and presence. The room dimmed, or perhaps he only outshone it. “I am over fifty thousand years old, in sapien time. I have lived as a galaxy. I have died as a god. I have witnessed the world expressed in a single, perfect equation that codified space, time, love, and infinity. I could have killed death if I wanted. There’s very little I don’t understand.”

Argie tried to ignore the spectacle. She quoted some forgotten Ape Cellar philosopher. “That which is abandoned in the name of efficiency was often an essential part after all.”

The Navigator returned to his normal stature and said, “Like having children, no? I cloned myself thousands of times up in Indigo, to see what would happen. It’s a traditional game there.”

“It’s not the same.”

“How?”

“Children are wayward. They demand sacrifice. We don’t sacrifice anything anymore.” She caught herself. “I mean...sorry, I know you’ve sacrificed a great deal.”

“Enough, certainly,” The Navigator mumbled. “As have you.” He lit a new cigarette. Another long silence held out.

“Do you miss it?” Argie said quietly.

“What?”

“Indigo. What about your friends?”

The dream fountain bubbled and gurgled to itself. Shapes appeared, human figures, five, ten, a hundred, a thousand of them, arms outstretched. Then they faded back to neon mist. “Yes,” The Navigator said. “I miss it.”

The sofas vanished. The geometry of the room altered and a door appeared suddenly in the wall. The Navigator wore a long, purple robe now and clutched a cane. “No sense hashing this out anymore,” he grumbled. “Shall we?” The door opened by itself.

Argie hesitated. “You want to go now?”

“Now.”

“How do we...do it?”

The house faded translucent and beyond the house was the great mountain in the distance, the tier portal at its tip. The Navigator pointed with his cane. “We climb to the top of that. Then, if we have to, we climb to the top of Arcadia.”

5.

8/11/2021

P,

What is known so far:

Around a month ago you dressed, took your tablet, purse, phone, as well as several changes of clothes, left the house around 6:35AM and drove to Croftbury Train Station. There you left the car without a ticket in the long-term car park and caught a train to London Waterloo. You then caught the tube to Victoria Station and boarded one of the cross-country trains. There is no further security footage the police have been able to uncover yet.

Your current account is drained, along with your savings. If they're telling the truth, none of your friends had any idea where you were going or that you planned to disappear. The translator insists that your mother also had no clue as to your intentions, and that you'd been talking to her only a few days before about how well life was going in England.

The head of the mathematics department at the university said you hadn't been acting unusually and that your students have reported no strange behaviour. Your research was going well.

I turned up at the university and with a bit of persuasion they let me into your office. It was messier than a crack den. No surprise there. The secretary came in and tried to apologise on your behalf. She moaned quite a bit about how you sometimes go a full day without eating and just live on coffee, and no wonder she's so thin, etc. I told her about the situation and she shut up and left me alone after that.

I liked being in there. It felt like your sanctum. I was looking through your brain and this time you couldn't change the subject. Usual academic rubbish as it turned out: books I know you've never read and never intend to, postcards from friends, journals and papers stacked on the desk for review that had already been released a few years back. And then some not-so-academic stuff: a tin foil wrap of hash in the drawer and a photo of me sleeping that I didn't know you'd taken.

One of your professor friends put his head around the door – Martin I think his name was. He already knew all about your disappearance. He didn't seem interested in showing any pity, which was nice. Like all your dull math friends,

he started talking about the thing like it was a numbers problem. ‘Extremely low probability she experienced a psychotic episode. She always presented as very stable.’ Maybe you were just sick of me, I suggested. “No,” he said. “She talks about you all the time.”

Do you secretly have a heart after all, Polly?

I asked about your research. He tried to fob me off with the ‘it’s complicated’ move all your dickhead friends do when they come to our place. I kept pushing and he gave in. Something to do with data compression, I think? Some new algorithm for storing files at only a tenth the space of regular compression. Struck me as odd considering you used to work exclusively on universe stuff and never had any interest in computers. God, only a few weeks ago I had to show you how to change the mouse speed settings.

Another little niggly you never mentioned: this was partly a government project and you’d signed the Official Secrets Act, the guy said. You do know you’re allowed to tell people that you’re not allowed to tell people stuff? Especially your husband. It would’ve been exciting. My wife the spy. They probably investigated me before letting you sign it. Thanks for the heads up.

After that I had a proper rummage around. Most of the papers on your desk were about data encryption and new computation algorithms. Hidden under a folder was a copy of *The Little Prince* with the bookmark I gave you last month. It’s fun to think of everyone tiptoeing past your office door, trying not to disturb the Great Bulgarian Genius, while you sit inside reading a kid’s book and popping out at lunchtime to get higher than a giraffe’s vagina.

There was a letter from your mother. I could read enough Bulgarian to get the gist. Nothing weird in there, just well-wishing and the usual charming doubts about *the Englishman* and *why ever did you marry him*, etc. I hope she gets ALS.

I span around in your chair for a while and did some thinking. Now the obvious spousal thing to do is jump to the conclusion that you were either kidnapped or coerced. Bear with me though. Kidnapping is unlikely since they would’ve had to break into our place and presumably force you out at knife/gunpoint and I think I would’ve noticed that. Coercion though, not so silly. A psychologically normal (as much as a Bulgarian can be) woman nearing the peak of her academic career leaves the house one morning, drains her bank account, and catches a train up the country. She sends no word to her husband, family, or friends about where she’s going. She even sets her students assignments the day before, obviously with the intention of marking them at some point.

I ate some of your Oreos and decided something was being held over your head. Blackmail possibly. Threat of violence more likely.



And then an unusual thing happened. There was a knock at the door and a man in a decent fitted suit came in and introduced himself as Jonathan Hayden. He didn't look very academic. He obviously had social skills for one thing.

"How are you getting on?" he said and smiled like he'd known me a long time. He was very well-spoken, Oxford-born I expect, or somewhere around there.

"Fine," I said. "And you are?"

He said he'd been supervising your research for the last year or so, but that he wasn't an academic. I pushed it a bit. Civil servant was the most specific he'd be before changing the subject. He said he'd been meaning to come and see me at home for a few days now, to check how I was doing. I said that was odd since I didn't remember us ever being friends. He parried all the hostility like some expert martial artist and I had to forcefully step in to stop myself liking him accidentally.

"Dr. Hare is an invaluable asset to this university, and to the research community in general. She's a gem," he said.

I told him you were also all right on the ukulele. I lied though. You're crap.

He asked me about what I did. I said I worked in IT just to see what would happen. He said that was nice and that he'd read a few of my books and ignored the lie completely. Evidently we were already deep in the game.

I said I knew about the government stuff and asked him to stop messing around. He sat down and sighed like something important was coming and said, "Dr. Hare, can I trust that whatever I tell you next goes no further?"

I said I might mention it to the cat, but she was usually quite good with secrets. His face got all serious. "Your wife was involved with some extremely delicate research regarding encryption, pertaining to aspects of British security. Her disappearance is extremely worrying, not just to my organisation but the British people in general. This is exceptionally serious, Dr. Hare."

"Well then you can tell me what she was working on can't you, Mr. Hayden."

He called the secretary in by her first name and asked for tea and honey. The secretary said she didn't have any honey. He told her to go and buy some.

"I really don't like honey in my tea," I said.

"I do," Mr. Hayden said.

"Anyway," I said.

"Not until we have our tea."

Then the next unusual thing happened. We sat in silence for 10 minutes or so, Captain Nutjob staring out the window with a serious face and me eating your biscuits. Do you know how long 10 minutes is in awkward-time? Probably not. You never got awkward. That emotion is only available to people with at the

least a minimal degree of social awareness. Or shame. Never felt that one either, did you? It was acceptable at parties for you to ridicule my friends for not knowing what an axiom was. Or the time my mum asked what you were working on and you said “numbery stuff”. Well look where your numbery stuff has gotten you now, Polly. Actually, I wish I knew.

The secretary came in with the tea. Mine had honey in it but I didn’t complain. Hayden took a sip and smiled and dismissed her. He moved his chair closer and his voice dropped to an almost monotone murmur and he said something like, “Dr. Hare, this isn’t in any way intended as a threat, but the withholding of sensitive information when questioned directly is considered an act of treason.”

“Okay,” I said. “In fairness that does sound a bit like a threat.”

And then the questions began. Had you been irritable at home recently? Had you ever talked about betraying the British government? Had you entrusted me with any sensitive information? Did you keep any data stored in a secret spot in the house? Did you take drugs? Did you still speak fondly of communism? Had there been any decrease in your libido? How did you seem when you got back from work?

I think I was honest about everything except the sex stuff which I refused to answer. If he knew I’m an archaeologist, he probably knew a lot more than that and this was just some test to check my allegiances. Or maybe he was simply doing his job, I don’t know.

The last question was if you had any religious leanings. I said you were so anti-theist that Richard Dawkins would’ve found you obnoxious. He asked the same question again using synonyms. I gave the same answer using synonyms. He made the treason threat again.

“Polly wasn’t religious in any way. Shall I write that down and sign it in blood for you?”

He smiled. “No thank you, Dr. Hare. Your word is good enough for me.”

He finished his tea and looked out the window again for a while. It was only then that I noticed the clean patches on the otherwise dusty desk. I asked if any of your documents had been confiscated.

“Nothing of Dr. Hare’s has been confiscated,” he said.

“Did you take anything of Polly’s from her office?” I tried again.

“No property of Dr. Hare’s was removed from her office.”

Jesus fucking Christ, these Oxbridge types. “Have you removed, taken, or otherwise relocated anything from the office we’re currently sat in, and if so, what?”

“Documents which fell under the umbrella of the Official Secrets Act or

possibly were tangentially related have been appropriated by the British government for further investigation.”

“Her computer too?”

Mr. Hayden nodded.

I asked what your current status was, as considered by the government. He answered very diplomatically that they had a number of questions for you, but were ultimately more concerned about your psychological wellbeing than anything.

“Well,” he said and smiled with all-white teeth. “I am terribly sorry about your wife’s disappearance. Thanks for indulging me today. We’ll let you know if there are any developments.”

I stood up and tried to initiate one of those joint-stares men do when they’re being serious, the kind that engenders honesty. If he knew your whereabouts, would he tell me, I asked.

On the condition that I was willing to extend the same courtesy, he answered.

I did some top-quality shouting then, tears and all. I’ll spare you the details but I said fuck a lot and made it clear that humans were usually a bit put out when their spouses went missing and if some jumped up toff prick in a suit thought it was fun to try and intimidate me after my lover had just done a vanishing act then he had another thing coming and I’d see to it personally that the Official Secrets Act was signed and stuffed so far up his arse it would come wiggling out of his mouth like a little paper tongue.

He smiled like I’d just wished him a wonderful day and said, “We’ll let you know if there are any developments,” and left.

I sat in your chair for ages after that and stroked the armrests. Your butt had been on this thing for years wearing it in. You told me once that all of time was ‘simultaneous’, mathematically speaking, that as far as the universe was concerned, everything was happening all at once. I’m still not sure I understand what that means, but I tried to feel you in that chair.

We were separated by time. Your body was elsewhere, but it had been in the chair for a long time before. Now my body was there.

All those nights in bed, all those hours asleep with the two of us coiled around each other like tree roots. Where are you sleeping these nights? With someone else? Or with a bundle of stolen secrets under your pillow?

I don’t think this strange Oxbridge dick would kill you, but he’d see to it you get locked up if whatever you’ve done is bad enough. What have you gotten yourself into? Would you just let me get you out of it?

If you were here, I’d hold you. Paradoxically it’s nice that you’re not here because you’d get irritated and call it soppy. Actually what’s up with that while

we're on the subject? Screwing: fine. Surprise presents for no reason: fine. Keeping pictures of me sleeping in your desk drawer: fine. Actual spoken verification of how your husband might unconditionally adore you: disgusting and unacceptable show of weakness.

It's one in the morning now. The cat is on my lap. (She misses you.) If you're not dead, which I suspect you aren't, then you're probably sleeping somewhere. Maybe in this country, maybe not, but somewhere on the planet certainly. There are coordinates that could define your location, and if I had them, I could drive or fly straight to you. You are still an objective thing in the world, like this paper, like the cat. In the morning you will get up and piss and brush your teeth and look your face over for pimples. You will put on pants and slide your boobs into your bra and close the clasp. You will eat, then probably drink a bucket of coffee. You will talk with people. You will walk about. You will be a fact.

I thought I'd start reading some of your books. That's how bad this all is right now. I avoided all the maths crap and the political crap and the postmodern crap and found a little volume of Einstein's letters. Here's one passage I liked. I guess you liked it too because you marked the page with a pink post-it.

After Einstein's friend Besso died, Einstein wrote to Besso's family:

"Now he has departed from this strange world a little ahead of me. That means nothing. People like us, who believe in physics, know that the distinction between past, present, and future is only a stubbornly persistent illusion."

An empty comfort, Albert. Thanks anyway.

In some corner of time a young and arrogant British archaeologist is boarding a plane for Eastern Europe and dreading his first visit there. He does not know many more will follow, and soon, instead, he'll look forward to them. In another corner of time a young and arrogant Bulgarian mathematician takes a photo of the young and arrogant archaeologist sleeping and hides it away for safekeeping.

Every argument happens at once in infinity: in the kitchen, in the living room, in the bedroom. It's deafening. Every intimate moment spreads across spacetime like warm butter; ten thousand, a hundred thousand, a million kisses all at once. The moments stack on top of each other, a great jar of pickled time: your voice, my voice, all the fucking, all the arguments, all the things we said and never said, every evening we drank away, every time we quietly wished we weren't married, every gripe and grievance, every saving grace, it screams. The thing takes a shape in time and expands to encompass the past, present, and future, and swallows everything we ever did, sums it all up on a single plane. And just when you think it might burst, just when whatever we've built feels like it might burst, it collapses right back down.

To one moment.

To this moment.

To the cat on my lap at one in the morning. I am here and my wife is not. At some point in the future perhaps I'll know where she's gone. For now I do not and the cat and I are prisoners, with time as a shackle and space as a jailor.

I'm pretty certain love is an evolutionary trick to convince a species with exceptionally dumb infants to stay together long enough for those infants to grow up. I'm pretty certain whatever chemical cocktail I'm still riding off of will be accounted for in labs one day, molecule by molecule. I'm pretty certain you and I are terribly matched in terms of personality and temperament.

Well I couldn't give less of a shit.

I love you Polly, and I'm old enough to know better.

And on that note I think I might go to bed.

Goodnight. I hope you're sleeping somewhere nice.

B x

## 6.

“What’s the belly all about?” Argie said.

“What belly?” The Navigator said.

“Exactly.”

They rounded a cobbled path and walked along a plateau for a while. Below them stretched the muddled districts of the Ape Cellar. Some of it belched smoke. Other sectors, far off in the distance and squirrelled away behind a huge blue forest, were chrome and gleaming under the moons.

“We’ll reach the tier bridge soon. Best you worry about more pressing matters,” The Navigator said.

“Okay. So what’s the belly thing all about?” Argie had been staring right through his torso for most of the climb up. Denizens often modified their bodies down in the Ape Cellar, but rarely did they remove whole sections.

“It’s complicated,” The Navigator muttered.

“I’m a clever girl.”

Argie squinted up at the mountain’s peak. A great purple vortex waited on its tip, extending up out of sight. From their distance they could hear its song now, a gentle call in grating flats and sharps.

“My work does not come without hazards,” The Navigator said finally.

“Wait, you got that crossing between tiers?”

“In a sense.”

“We’re about to cross tiers. What if I end up in Lemuria without a foot or a head?”

“That’s fine. By the time we get to Indigo no one will notice. They don’t have feet or heads there.”

“God damn it, why didn’t you mention this earlier?”

The Navigator whirled around. “Do you want me to guide you or not?”

“Of course, but not if we come out the other end mutilated.”

“We won’t. I know what I’m doing.”

Argie stuck her hand straight through his torso and out the other side, wiggled her fingers. “Really? So what’s this – a fashion statement?”

The Navigator lit a cigarette. “You’re like everyone down here. You understand a hundredth of the truth and think you’ve got it licked.”

“Educate me then.”

He rolled his eyes. “Last time I left Lemuria I did it in a hurry. I’m not the

most popular of denizens at present. A speedy exit makes for...complications.” He nodded down at his missing stomach. “Given the haste, I didn’t assign all of my selfsense in the transport request. Parts were left behind.”

“What happened to whoever you were travelling with?”

“Luckily he’s not picky about how many ears he wanted throughout his life.”

“Oh come on.”

The Navigator pointed accusingly with his cane. “Should we get into a spot of bother, I’ll leave you behind. Don’t you worry about that.”

“Suits me.”

They continued walking, the old man hunched and ambling. The vortex sung louder as they neared. “Some ground rules.” The Navigator raised his voice over the vortex’s hum. “If I say run, you run. If I say stay, you stay. I’ll try my hardest not to get you hurt, all right?”

“All right.”

“And no wandering off. Some girl did that a few cycles ago. Couldn’t find her after that. Last thing I heard she ended up in a zoo.”

“A *what*?”

“Oh, a few Lemurians collect you lot, put them in little enclosures. It’s fun for them, you see. Like keeping a pet.”

“What do they do to them?”

“Whatever they like, I suppose.”

“That’s barbaric...”

“No more barbaric than you and your infant.”

“That’s not the same at all,” Argie barked.

“What, creating life just out of boredom? I’d say it’s worse actually. At least the Lemurians are doing it for a reason, even if it’s sadistic. You just did it for fun. Quite a thing to create a life for, no?”

“What the hell would you know about it?”

The Navigator only chuckled and led them further up the mountain. The cobbled path twisted around again and brought them out over a great desert. In the distance, Ape Cellar denizens raced each other across the sand on enormous steam engines, thousands of tracks all in parallel. Beyond that the sky was filled with equations etched in brilliant white light: Newton and Maxwell’s better-known discoveries, and some string mathematics Argie wasn’t familiar with.

“Was it Hare?” The Navigator said shrewdly.

“What?”

“Was it Benjamin Hare that made you so sapien-friendly? You’re all down here for one reason or another. You’re clever and you seem to know a fair bit about sapien history. I’ll bet it was Hare that did it.”

“What’s it to you?”

“That’s a yes then. I’m not an idiot myself. I know my history. I’ve read some of his letters. Look, I get it. Really I do. It’s a stupid reason to hold all the sapiens on a pedestal, but I get it.”

Argie squinted up at the vortex. “If you must know, yes. It was Hare. To begin with anyway.”

“Not much of a writer, was he?”

“You’re not going to bait me, if that’s what you’re trying to do.”

The Navigator turned back for a moment and winked. “Wasn’t my intention. He just isn’t a god, but it seems to me that’s what you lot are trying to make him.”

*“You lot?”*

“Whatever you call yourselves. Ape-fuckers, we used to say in Indigo.”

“Just stick to your court and I’ll stick to mine. How about that?”

The Navigator grunted.

“Why don’t you just grow it back?” Argie said then.

“Huh?”

“Your belly. Why don’t you just grow it back?”

“Complications.”

She thought this over. “You can’t. They put limitations on your selfsense didn’t they – when you were exiled. That’s why your stomach’s missing.”

“Something like that.”

“Then why are you still risking guiding people up tiers? What if you lose something important next time?”

“Why did you have your daughter?” The Navigator asked dully.

“I was asking about-”

“I know, but just answer the question.”

Argie considered this a moment. “I’m not sure. It was just an impulse.”

“Right, and if you hadn’t had her, you’d never really have felt fulfilled, would you?”

“I suppose not.”

“Then we’re not so different. I used to spend my time up in heaven. Now I’m stuck down here in the gutter. Few things light me up of late. Shepherding you ape-fuckers through the tiers is just risky enough to bring back the spark on a good day, and at least kill the boredom on a bad one.”

They continued to ascend. The landscape below was a child’s toy now, the steam engines still careening across the desert, smoke pouring from great glass funnels.

Argie split her selfsense into parts, one keeping an eye on the route ahead, the



other researching The Navigator via Arcadia's interface. Stories of a navigator turned up in obscure conspiracy circles. There was also a classified listing:

WILL SHEPHERD BETWEEN TIERS. TWO PROOFS MINIMUM PAYMENT.

"Why don't you expect me to pay?" Argie said.

The Navigator didn't reply and only mashed his cane into the dirt and when she almost thought he was ignoring her he said, "I reckon you've paid enough already."

"Oh how cryptic."

The vortex was loud enough to almost drown out speech now.

"I told you. You won't like what you find," he said.

"Is my daughter dead?" Argie said quietly, thinking maybe the noise had eaten her words.

"Worse, I expect."

Kaluza had learned fast, both about the rules of Arcadia and the rules of her mother. She walked a fine line in between. She still created bizarre shapes when her mother was asleep, but kept them limited to only a few metres across as per her mother's instruction. Argie gave the infant burrow-rights and the infant got to work redesigning the place, shrinking the beach, changing the hue of the sky, conjuring land animals that dwelled both in four and five dimensions; disappearing into the cliffs and reemerging out the other side of the island.

Kaluza stopped using the interfaces entirely and began learning solely by intuition from Arcadia. Argie would mention some obscure subject to her and the child would seem ignorant, then enlightened only a few minutes later, able to lecture her mother on all aspects of it.

"What did you do before?" Kaluza asked one day.

"Before what?"

"Before me."

"I worked in horology."

"What's that?"

"The study of time, I suppose."

The infant wrinkled her nose and stared off into the distance with vacant eyes, obviously looking into the matter herself with the help of Arcadia. Finally she said, "I still don't understand why you'd want to."

"Time moves differently depending on which tier one is on," Argie said. "Down here, time moves very slowly indeed. In Lemuria, time moves at maybe twice the speed. In Indigo, even faster."

"How fast?"

“We’re not sure. Things are a bit more slippery up there. Events precede their causes sometimes.”

The infant scoffed. “How’s that possible?”

“Well, imagine it like this. If you knew every position of every atom and all of their velocities, you could predict where they’d all go, couldn’t you?”

“Isn’t that impossible, to know both at the same time?”

“Don’t be stupid, that was a sapien physics-myth. We solved it cycles ago now. Anyway, Indigos might be very clever and very alien, but they’re still part of a closed system. Indigo tier itself knows what the denizens are going to do, even if the denizens don’t. Sometimes Indigo allows denizens to step into their own future, or lean back into their own history.”

The infant’s eyes grew wide. Argie immediately regretted indulging the child.

“Can they relive the same day over and over?” the infant said.

“Maybe, I don’t know.”

“But you said that’s what you studied.”

“From down here, yes. It’s a pastime for some of us in the Ape Cellar. We don’t often get to see the tiers above, so we learn what we can about them with our instruments. For example, every now and then a Lemurian or an Indigo comes down here to visit, then goes back home. When they come down again we can read their tags to see how much they’ve aged. If it’s, say, a thousand cycles but only a few cycles have passed for us, then we know they’re getting better at manipulating time. You understand?”

“I think so.”

“It’s not a good thing, you know. Meddling with time I mean. All sorts of things can go wrong. Your selfsense can be broken apart by a paradox, or you can go mad.”

“How do you know?”

“There are plenty of clever denizens down here. We know enough to work out some of the rules in the tiers above.”

“But you’ve never been there...”

“No.”

“Will you take me?”

“Maybe one day.”

“Tomorrow?”

“Not tomorrow, no.”

“Then when?”

“Look, the world is very complicated.”

“You said that before.”

“And you’re still young. When you’re old enough you can go and explore the

tiers, if you like. But most of us stay down here. It's safer, less to go wrong, less to confuse. We're closer to how our ancestors lived."

Argie wasn't sure what was coming next, but she could predict the flavour of it. And she was correct.

"Progress is only possible via deviation from the norm," the infant quoted.

"That's true, but there has to be a limit. Everyone up there has lost their minds. They've forgotten what we were before, given it all up. How we're living now, it's the safe path."

The infant was quiet after that, but Argie knew damn well what her daughter was thinking: what kind of idiot would ever choose the safe path?

"Now," The Navigator said. "Quite a thing, isn't it?" The peak was unremarkable, built only for the vortex, apparently. The vortex itself span and sang before them, unstable, twisting back through hypergeometry – starting in the Ape Cellar, ending in Lemuria.

Argie looked into the monstrosity, trying to find a single recognisable form or shape. "Will it hurt?" she said.

"Sometimes. Remember, there's something we need to do first."

Argie nodded and sent a formal tier transfer request for two. Arcadia granted permission immediately and added a warning about inexperienced travellers. "All right," she said.

"Well then." The Navigator gestured to the vortex, put on a paternal smile. "This is the easy part."

"Just step in?"

"Just step in."

She edged closer. The vortex began to churn wildly, anticipating new passengers. "There's something you need to hold on to for me," she said suddenly. "In case this all goes wrong."

"It won't go wrong."

"Fine, but still." She gifted The Navigator an enormous selfsense packet; her memories of the last four thousand or so cycles. It took him a moment to examine the thing.

Finally he shook his head. "And what do you expect me to do with this?"

"Just keep it safe."

"Don't you have anyone you'd rather-"

"No."

He said nothing then and nodded and lit a cigarette and beckoned again to the vortex. "Well then, I'll be right behind you."

She glanced up the long stem of the vortex, stretching into the sky and

beyond it. At the end of that stem, somewhere, lay Lemuria. And in Lemuria, perhaps, was her daughter.

One morning Argie woke on the beach and looked for the child, but couldn't find her. She walked the cliffs calling her name. Along the way were interfaces, dozens of them, all left lying open. Each one was an information query about Arcadia, about its people and geography, about the culture. Her stomach sank. She found the infant sitting on the edge of a cliff looking out over the ocean. There were no hypershapes now, no exotic five-dimensional animals lolling about. The infant had grown considerably, in body and selfsense. Now she presented as a pale young woman in a sapien dress. She had Argie's cheeks perhaps, but the resemblance stopped there.

"If I wanted to leave, could I?" Kaluza said.

"I told you, you're not a prisoner here." Argie took a spot next to her daughter. "But look. The world outside our burrow isn't safe. Some denizens are devious and violent and will take advantage. Others just want to see you broken for no other reason than the fun of it."

Kaluza snapped back suddenly, "And others are trying to reach the bottom of nature. Did you know that? The Grammarists up in Lemuria, I've been learning about them. They say they're close to unmasking nature's true face."

Argie chuckled. "They've been saying that for ten thousand cycles now, I'd take it with a pinch of salt."

"Yes but—"

"I get the idea. The world is big and intriguing and you want to go and play in it. Fine then, I'd never dream of keeping you here against your will. But I'll come with you."

"All right." Kaluza smiled and her eyes grew wide.

Argie could've just transferred them both to the world outside with a burrow request, but instead conjured a huge golden doorway in the cliff face. Sure enough Kaluza enjoyed the spectacle. The two of them passed through holding hands.

The Ape Cellar hit them immediately, the stink of cooked animal flesh, the blaring light of the mirror beacons. They had emerged into a busy street, folk everywhere; some in cloaks, others naked, market stalls in every direction, some denizens levitating over the market and watching from above, others disappearing into the cobblestones beneath like diving whales. Kaluza's hand slipped from her mother's and Argie grabbed it again and shepherded the child through the chaos. She knew the district well enough, she'd lived here as a horology researcher. They passed down a street of buildings reduced to rubble,

and briefly through a small forest of some kind, and emerged before a great temple of stone and brass. A few denizens in brown robes milled about on the lawn, but the place was empty for the most part.

A statue waited before them, a sapien male made entirely of glass, the height of ten market stalls.

"The Glass King," Kaluza whispered.

"You read about him?"

"A little."

"The Glass King *built* Arcadia, understand? The world was made, not formed. Thousands of years ago, by the sapien metric."

"Why?"

"Why what?"

"Why did he build Arcadia?"

"Because sapiens broke easily, and even if they stayed careful they still wore down and died. Not so deep into their history they'd peered into physics and wrapped the universe up in equations and built huge societies, and they still hadn't done a thing about death. The Glass King vowed to kill it."

"To kill death?"

"To kill death." Argie idled back through her selfsense to her early days at the Horology Faculty. She quoted the Glass King himself: "We shall hereby endeavour to banish endings from the world and train our moral sextants on a new, perfect horizon. We vow to purge weariness, slaughter fragility, and make a court jester of time."

Kaluza's eyes were wide again, her mouth a little open. Argie quietly prayed she'd made the right decision, bringing the child here with her mother rather than letting her discover it by herself later and misinterpret the whole thing horribly.

How much information was too much? How little would be an immoral lack?

"Did it work?" Kaluza said quietly. "Killing death?"

"Sure. You can end your selfsense whenever you like in the Death Forest, but if you don't want to then you need never do it at all."

Then even quieter Kaluza said, "But things will wear out one day."

Argie considered the next sentence carefully. It would no doubt plant even more dangerous ideas in the child's head, but like the Glass King's rantings it was still better coming from her mother than some idiot denizen. Finally she said, "There are Indigos working on that problem, so some rumours say."

"On killing entropy?"

"That's the idea." Argie turned about and went to lead her daughter back outside. "Anyway, things are a bit more bearable down here. No wild schemes.

Shall we go back to the burrow? We can talk polynomials and ride dragons if you like.”

Her daughter had not turned about to follow, had not moved at all, but only stood and stared at the effigy of the Glass King. Argie knew then that she would one day lose the girl entirely.

“Well, we haven’t the luxury of time,” The Navigator said. “Tick tock.”

“Give me that,” Argie said. She took a few quick drags on The Navigator’s cigarette, sputtered, and gave it back.

Then she passed into the vortex.

7.

19/11/2021

P,

After the delightful Mr. Hayden's visit to your office, I've decided to start keeping these on a USB stick in the safe. Given that there's obviously more going on here than I'm aware of, it also seemed like a good idea to start using these letters to keep a record of the investigation. (Benjamin Hare the Righteous, who, against all odds triumphantly locates his wife, rescues her from the brink of whatever it is she's on the brink of, and gets her home. ((They then proceed to do kinky shit to each other.))

Where to start?

The last week or so I stayed inside. I took lots of hot showers and sort of enjoyed scalding myself and tried to watch TV, but couldn't seem to follow it that well. Mum came over and was nice and asked loads of serious questions about what to do next. I didn't actually say it to her, but I know the facts of the matter. There is nothing to do next. The police are apparently working on the case, following up whatever meagre leads they have. Every morning I phone their office and get the same polite secretary who patiently explains that nothing new has come up and I will be the first one they contact in such an event. If I probe deeper about what is actually being done she repeats a line about how they are giving it their best effort and have their most diligent and gifted officers on the case. So I stopped calling. And I stayed inside. And I took lots of hot showers and watched TV.

Can't shake the feeling everyone who comes over to comfort me secretly suspects you just ran away. Everyone on my side of the family has always thought you were nuts anyway. You're so detached from reality that I bet that's news to you. So no Polly, you can't come away with my family for Christmas and spend almost the entire time by yourself down on the beach and not draw attention. You can't openly call Mum *simplistic* over Sunday dinner because she doesn't understand Bayesian inference. And you can't just up and leave your life in the middle of the night without causing significant damage to your *fucking husband*.

God damn, if you did this all on purpose...

One evening we went to see some Polish pianist - I forget who - play at the National Theatre in Sofia. On the way out you said you needed the toilet so I waited for an age by the women's loos. Turned out it was the wrong one. We found each other eventually and you were a bit cold and short and I guess it coloured me cold and short too. You made some passing remark about how forgetful I am so I took a shot at how utterly distant you could be, and within ten minutes we'd descended into a screaming row. I would later learn how that morning one of your papers had been rejected, something you'd been working on for an age. Still, we walked through Borisova Gradina park screaming at each other a while, really yelling, and for the first time since we'd met I decided I was done; done with your hysterics, done with your mood swings, done with sticking up for myself over what felt like the most innocuous shit. As anyone realises with age, no relationship is utopian. There will always be disagreements of course, but at some point one has to put their foot down and say enough. It requires courage.

You walked ahead for a bit, bought a beer, demolished it in true Polly fashion, then slowed down. I decided when you reached me I'd end it, call the whole thing off for both of us, no undo button. Surely you knew it was coming anyway. What with me running out of funding and your career frankly sitting in academic limbo, we'd been at each other's throats for months. No future was possible built on such uncertain foundations.

You joined my side finally and rubbed your eyes with your sleeve and put your head on my shoulder. Then you said, "Want to get married?"

"Sure," I said. So we did.

A few days ago I got to thinking about your ex-lovers. One in particular, Dimitar. You mentioned him in passing once when we were high. I think I asked a few casual questions that weren't really that casual and you gave me the rest. You'd been engaged to him in your early twenties, you said. You both worked together at the mathematics faculty on your PhDs back in Bulgaria. That was it.

So I called one of those telephone translators who in turn called your mum. I asked her about the mystery ex and she said his name was Dimitar Ivanov.

Great. Do you have his number?

No.

Do you know where he lives?

No.

Can you help in any way?

No.

What is your general opinion on Half-Life 3 ever being made?

No.



Sometimes when I eat parsley, my ears turn slightly red. What could be causing this alarming phenomenon?

No.

Top work, thanks Mrs Alexandrova, you witless arse.

Luckily the internet exists.

There were fuck knows how many Dimitar Ivanovs online. One was working at Sofia University in the mathematics faculty. Seemed like a safe bet.

I argued with the faculty's receptionist in broken Bulgarian for just under half an hour and she finally gave me what she claimed was his private number. A fairly nice woman called Georgana answered and told me she didn't know who Dimitar Ivanov was, but that he was probably a liar because most men are. I called the secretary back and did a bit of passive-aggression and she seemed to respond well because the next number she gave me was a man.

His English wasn't bad. When I went to introduce myself he said, "Yes, I know who you are," and didn't sound terribly happy about it.

"I'm the guy who married your ex and gives her abundant sexual gratification," I wanted to say, but stopped myself just in time.

"What do you want?" he said.

I asked if he knew you were missing. He said yes, your mother had told him a few days ago. Did he know where you'd gone? No. Was there anything he could tell me that might help?

"No. I'm very busy, Mr. Hare."

So I pretended I was a private investigator in my head and asked what he did. He said it was something to do with health statistics and it was complicated, then gave a small exasperated sigh. I asked what you'd been working on those years ago. He didn't sigh this time. Instead he said, "Polly was very clever." I agreed and waited.

And then, with a bit of prompting, he explained to me your Big Idea. You know, the one you never ever mentioned to your husband, and have apparently been pursuing for years now. A bit more reluctantly he even sent me that paper you wrote about it. You know, the one you never ever mentioned to your husband.

EXCERPTS INCLUDED FOR HISTORICAL CONTEXT:

### **Towards an Effective Empirical Method via Algorithm Utilisation**

*We should like to present herein a suggestion for a new mode of empirical investigation, particularly in the field of theoretical physics,*

with a strong emphasis on mathematical prediction. Primarily we would like to suggest an alternative to the traditionally empirically-led mode of modern theoretical physics, and instead lay the groundwork for the assembly of new theoretical frameworks using predictive artificial intelligence, as opposed to deduction from empirical results. Theoretical (as well as traditional) physics has largely proceeded by the gathering of evidence, and the subsequent construction of a framework to explain said phenomena. We should like to present an alternative.

The research outlined in this paper relies on the principal assumption that nature is logical on a fundamental level, or at least that the phenomena physics investigates are founded on logical principles. We would be remiss not to mention that if for some reason nature is foundationally chaotic, our research is ultimately useless in any pragmatic sense. However, with this assumption in mind, one would expect logical and mathematical forms to appear in nature, even at the macroscopic scale, as indeed they do. We regularly observe the golden ratio in a wide range of natural phenomena, for a well-known example. Countless more exist in geology, in meteorology, in whichever empirical field one cares to name. Even the distribution of human populations follows a similar distribution to that of celestial objects affected by gravitational attraction. Our present level of understanding, however, may be mistaking these phenomena as apparently arbitrary and unrelated. The energy threshold of the Higgs boson is currently thought to be entirely at the whim of a cosmic lottery. In actual fact it may be the result of a profoundly logical framework built into nature itself, where the particle must be situated at that threshold and no other. In much the same fashion as circles must adhere to  $\pi$  and an equilateral triangle's internal angles must adhere to sixty degrees, the Higgs boson and its behaviour (as well as the electron, proton, neutron, and all other particles in the Standard Model) may be intrinsically wired into nature itself.

We shall henceforth call the purely mathematical domain I and the physical domain II. The link between these two domains has been instrumental in the production of new technology, via exploitation of theoretical models in physics. Up until this point new models have operated at the whim of new data. We shall, in this paper, propose an alternative methodology, reliant on a logical groundwork for physics.

The linkage between domain I and domain II has been slow to

*reveal itself throughout scientific history, given that mathematicians and scientists generally work within the scope of their research. With the advent of supercomputers this need no longer be a limitation. We envisage a sophisticated algorithm undertaking this work that might far surpass previous efforts. The algorithm in question would be tasked with looking for previously unnoticed parallels between mathematical absolutes and already confirmed data in theoretical physics, as well as empirical observations in a number of other fields.*

RETURN TO HARE DOCUMENT:

I told him I didn't know a damn thing about the 'axiom machine' or whatever he called it and I swear I caught some sympathy in his voice. And I felt a sort of rage then, one I don't remember ever feeling before. (God this is nice, being able to say this stuff to you, without fear of some brush-off reply or a disapproving glance.) I'd had your time, your presence, had your marriage vows and all that nonsense, but obviously your mind – or the vast majority of it - belonged with your ex-lover.

"Why didn't Polly mention any of this to me?" I said to him.

"It's complicated stuff," he said flatly.

One day, an early day – you'd just moved over to England – we spent the morning in bed, then walked to the park and laid down on the grass. The sun was just hot enough. We got talking about something mathy and abstract, I forget what. I asked you if it was possible we had everything licked, that everything had been discovered, more or less. This question was entirely designed to demonstrate to you that I was not an idiot. I'd read an article about transistors reaching maximum population on a circuit board or something, and computers getting harder to build in the near future. On top of that, quantum mechanics and all that stuff might reach a point where our little brains just couldn't decipher it anymore. I assumed you were going to say something dismissive, shrug it off.

Instead you nuzzled up a little closer and whispered into my ear, "We're still ants, just feeling out ridges in the great cosmic garden path."

That seemed pretentious at the time. A few years later and I was the ant, looking for the ridges in your personality; some dumb insect waddling about, it felt like, doubling back on myself, pressing forward, doubling back, pressing forward – just desperately trying to find whatever it is dumb ants are after - respite, solace, and a little love – and not getting so far with any of them.

"I've nothing more to tell you," Dimitar said.

I asked a few more hurried questions but he parried them all, so I told him to

go fuck himself and hung up.

That afternoon I tried looking for any research even remotely related to whatever it was you were doing, but I didn't know enough to even get the search terms right.

I pestered the police some more, hung out with the cat a bit in the garden, and started drinking around four. I was tanked by five.

Clare next door said hello over the fence, asked how everything was going. Just tip top, I said. She leaned further over and said in a quiet voice, "You know, it does get easier." I remembered her husband had died a few years ago. Yes, I was going to shout back, *but your husband was old and Polly's not dead*, and I realised then that only one of those statements is objectively true at the moment. You could be dead. You could well be dead.

And with the booze on top of me, it suddenly seemed like human history was just one brutal onslaught of grief, and that losing a lover or a child was really part of the burden of being alive in the first place. Somehow this was a rite of passage, a fucking awful one, but a rite nonetheless. Beside me stood God knows how many millions of other humans: Clare, Chinese peasants, Roman senators, Neanderthals, all of them reluctantly learning to practice the art of accepting the unacceptable. Clare said goodbye and I refilled my glass.

My phone rang. I let it sing away to itself. It rang again, then again, so I picked up.

"Benjamin?" said a deep Bulgarian voice.

"Dimitar."

"I've spoken with some of my colleagues. If you would be willing to travel over here, we would be willing to tell you more about Polly's research."

"Why?"

"You want to hear about it or not?"

We exchanged details. I booked a flight for the next day. They clapped when the plane landed, whatever the fuck that's all about. I saw your ghost on the roads as the taxi took me to the hotel: that evening when we were on Pirotska Street and you started dancing, hair wet from the rain; the first time we ever properly touched. You pulled me into a doorway and we made out for what could well have been a year.

A quick sleep, a walk to the cathedral in the morning, a cup of coffee, then the university. Dimitar was waiting outside with a dark-haired woman who did not introduce herself. He asked if I might feel like some tea and I said I would. We walked to a café and sat in awkward silence waiting for our drinks to come.

Finally Dimitar said, "This is Maria. She was a colleague of Polly's." The woman's expression was as cold as his and she kept her eyes on the table.

“All right. And what am I here to discuss, exactly?”

They exchanged a glance, then Dimitar mumbled, “Polly said you were never too good with mathematics.”

Fuck off, I thought. “That’s true,” I said instead.

“So you can imagine that trying to condense difficult work such as your wif-” he caught himself, “-such as Polly’s isn’t easy.”

“I read the paper,” I said.

“You understood it?” Maria said.

“Sounded like just another theory of everything to me.”

They exchanged another glance. “You are not such a stranger to physics then,” Dimitar said. “That’s good.”

We all sipped our drinks. You’d be proud of the next bit. “As I understand it,” I said carefully, “she wanted to build an algorithm that could start...doing science on its own, right?”

“No,” Maria said.

“No,” Dimitar said.

“Right. Okay.”

They both wore that expression universal among mathematicians, or your dickhead academic friends anyway; the one that says, Really? I have to explain myself to this primate?

“Nature is deeply mathematical in places,” Dimitar said.

“Is it?”

“Yes. As you should have read in the paper, there are lots of phenomena that pop up regularly in spiral galaxies and biology that can be explained alone with an application of logic and first principles.” He glanced again at Maria and made a sort of weak help face. “Common forms manifest in nature all the time. A cell, for example, is not so different to the structure of a society. The nucleus is something of a government, the cell wall a sort of national border. Or, think how similar a solar system is to the structure of an atom, spheres caught in the orbit of a larger body. I mean, particles aren’t actually solid matter in the same way, but you understand I think. Nature utilises the same architecture again and again. Why?”

“Maybe it’s a fun coincidence,” I said. This seemed like the kind of cynical bullshit you’d come out with.

“Maybe,” Dimitar said. “Or maybe it’s an expression of something deeper, a fundamental logic that would be the same across all universes, at any time. Could you imagine a universe where pi didn’t dictate the circumference of a circle, for example?”

“With enough LSD perhaps, yes.”

“From this you would think that the whole universe might be built on some logical principle, even if we can’t...” Maria said.

“Unmask,” Dimitar helped.

“Unmask, yes – even if we can’t unmask it yet.”

“And that’s the theory my wife was trying to prove?”

Dimitar smiled a little darkly. “Oh no. She took it for granted that there must be an underlying logical axiom, or a set of them. What she wanted to do was tease out the thing itself, with her algorithm.”

“How?”

“Difficult to explain.”

“God damn it, I’ve flown several thousand miles to get here and the last few months have been hell. On top of that you’re now telling me my wife was doing something important enough to draw the attention of the UK government. So you better damn well-”

“The UK government?” Maria said quickly.

I told them about Hayden. Dimitar sighed. “That is not good news.”

I repeated my previous speech and tried to sound a bit more dignified.

“All right, all right,” Dimitar said. “As I said to you on the phone, it’s complicated, yes? Nevertheless. The purpose of the algorithm was to look for connections between purely mathematical phenomena, like pi and the Fibonacci sequence, and attempt to find correlations in the real world. Science has been trying to do this for a long time now anyway. Polly thought a computer could do it much faster. If enough correlations were found, she wanted to start predicting new physics with it. If the predictions were verified, well then...”

“You wouldn’t need big particle colliders anymore,” I said.

They both looked impressed. “That’s right. No more empirical investigation required, not really. Science could be done with reasoning from the ground up, not the sky down. Of course the predictions themselves would need to be verified experimentally, but that’s it.”

“And,” Maria added, “we might get a little closer to understanding why physics is so ugly.”

“Is it?” I said.

“Yes. Why are there seventeen elementary particles? Why is ninety percent of the universe invisible? Why does-”

“Understood, thanks. How far did she get?”

A long silence followed. Then Dimitar finished his coffee and lowered his voice and said, “We don’t know. She left the university not long after and moved to England. She stopped talking with us about her research.”

“At least I wasn’t the only one out of the loop then.”

“Benjamin,” Maria said and met my eyes for the first time. “We’re telling you this because we’re confident Polly’s idea got up the ground.”

“Off the ground,” Dimitar said.

“Off the ground.”

“So?” I said.

“Other people will be interested in a thing like this. It could do damage.”

“A few pointy-heads getting excited about another Higgs boson can’t be that dangerous.”

Dimitar muttered something in Bulgarian that didn’t sound very nice. He switched back to English. “It’s a bold idea. If it worked, it would have the potential to leapfrog physics.”

“Leap...frog?” Maria asked.

“Boing,” Dimitar said.

“Ah boing, yes.”

Dimitar leant in. “Look. Maybe her idea didn’t work at all. There are holes in it, as with any theory. The amount of computing power required, for example. Plus, it’s not easy to build an algorithm like that. Computers can’t do context. ‘Look for circles’ is an easy concept. ‘Why is an electron a sphere?’ is rather different. You see?”

I nodded.

“You’re aware your wife is mad?” Maria said.

“Oh yes. It’s why I married her.”

“And she believes very strongly in things.”

“Another one of her charms, yes.”

“She believed in this. If someone threatened her idea, she will have put it before everything else.”

“Even you,” Dimitar said with a hint of a grin.

They paid for my drink and we took a walk through the park. Dimitar pointed out statues of various revolutionaries and Maria stopped occasionally to pet dogs. They were not bad people, I realised. They just didn’t do the bullshit customary English games of excessive politeness. We made idle small talk about the history of the park and then I asked Maria outright where she thought you had gone.

“You say she left in the morning. That means she had a plan. That is good. She is good at game theory. She plays games well.”

“Was I a part of that?” I said, not really wanting to hear the answer.

“What could she get from you?” Maria said with a sort of reassuring wink. Sexytimes, I thought. And decent tea.

“There is something I read in Polly’s paper,” I said. “The ‘axiom’. It keeps

coming up again and again. What is it?”

Dimitar stepped in after a bit of thought. “If Polly is right, subatomic and relativistic physics can be summed up in a general formula, just like force and gravity. There will be a mathematical starting point from which the architecture of all matter and energy is derived, and all forces in nature are derived. This formula will be rooted in pure logic, and can be deduced from working backwards to first principles using Polly’s algorithm – if it works. She often dreamt of the axiom when we worked together. She said it must be staring right at us and we’re just stumbling about blind. That was her Waterloo.” I shook my head to say, huh? He thought for a moment and tried again. “If Polly was right then all of physics will be based in logic, however strange and wild it might seem. There will be deep and structural reasons for why there is X amount of matter in the universe, and why it behaves in such a fashion. There will be deep and structural reasons why quantum mechanics is so different to our physics up in big-world. Everything will have an underlying foundation in logic. The universe could not have been made any other way.” He held up his hands. “And since we’re a part of that, we’re sort of special.” He nodded to Vitosha mountain in the distance, the highest peaks kissed with snow. “The Balkan range is a fact, it exists. But what built it was pressure. That pressure was determined by geology. Geology is built on logical principles, *physics with trees on top*, as the saying goes. The tectonic plates could not have behaved in any other way. You see a mountain, but it’s really just another offshoot of logic’s quiet place in the world, regulating everything as she pleases. The universe is logic’s daughter, and by extension so are we.”

“I think I understand,” I said slowly, not sure if I was telling the truth.

“Good,” Maria said. “Want to go drink a lot?”

“Yes please.”



## 8.

The Ape Cellar died around Argie almost immediately. She reached out to steady herself, but was unable to control her legs; they had been dismantled already. She panicked, searching next for her arms: also gone. She tried to cry out; no mouth.

“Just keep it together. Won’t take too long to pass through,” came The Navigator’s voice. She searched about and made out his selfsense ahead of her in five-dimensional space, also robbed of limbs.

“What’s happening?” she cried with her selfsense.

“We’re in the void between tiers. Arcadia won’t let you pass into Lemuria as an ape, so it has to make a few adjustments to us first. Don’t worry, it won’t hurt. Just keep it together. You’ve been living in Local Space your whole life. It’s designed to make sense to...*your sort*.”

She looked about frantically. They were in a dim murk, hypershapes passing by at colossal speed, flashes of colour beyond the normal spectrum. Bizarre rising and falling tones rang out, almost deafening at times. “We’re still between tiers?” she shouted.

“Yes. We’ll cross over to Lemuria soon enough. We’re moving, though it doesn’t feel that way.”

She tried to take deep breaths with her missing lungs. There was a howl in the distance. “What was that?”

“Just keep it together, understand?”

The howl came again. “There’s something in here with us.”

“Probably other denizens coming back the other way,” The Navigator said.

Argie tried to still her mind. “It’s so dark,” she said.

“Mmm,” The Navigator grumbled.

Strange Doppler echoes sounded from all around them, animal cries, the din of machinery, nursery rhymes sung in voices that were neither male nor female.

“Navigator....” Argie whispered.

“It’s all right, I’m here. Shall I tell you a story?”

“I...”

“The story of how the tiers came about. You know that one?”

“No.”

And so he told it.

In the beginning, he said, there were no tiers or burrows, only a single open scape. Denizens were entitled to as much of the environment as they desired. Some built homes of a sort. They were Original Migrants after all, having been modelled on sapien brains. They sculpted mountain ranges and deserts, conjured oceans, painted galaxies. The scape became one enormous homage to collaboration. Some sectors were Escher-like, defying geometry and gravity. Others were prosaic and closely mirrored denizens' homes outside of Arcadia, pulled straight from their memories. There were ideological differences of course, but nothing terribly major. Most denizens were still cautious about altering their own selfsenses, despite having every chance to do so. Many still used sapien language to communicate for example, still wrote music, still ate and drank, still pissed and fucked. But some pined for children, and so they had children using a very early prototype of the birthing machine in Nufeeja. The babies were small at first, then slowly grew larger and acquired language and the ability to manipulate Arcadia in the same fashion as their parents. They were the first generation born inside Arcadia, rather than having migrated into it.

From the outset the children were obviously quite different to their parents, but this was not thought a huge problem. They were less interested in speech, considering it an inefficient mode of communication. Instead they began sharing information by selfsense directly, publicly at first, then privately.

In some obscure region of the scape lived the Glass King. He had been among the first to enter Arcadia. It was his job to regulate administrative matters, for he had powers and privileges in Arcadia that were unprecedented.

One cycle an original sapien migrant came to the Glass King. If we keep letting denizens procreate, the migrant said, the children will surely develop beyond our control.

The Glass King presented as a sapien, wearing nothing but a white toga, his beard long and unruly, but his face still young and handsome. Despite all his flaws he was known for his perfect wisdom. He considered the matter. Then finally he informed the migrant before him that nothing could be done. Yes, the children may develop beyond measure, but it was no place for a parent to limit a child's aspirations. Trying to retard the process would only make it worse in the long run anyway.

And so Arcadia's second generation became estranged from their parents soon enough. It wasn't a violent process. They didn't rebel or curse. They simply ceased talking and spent more and more time in an area of the scape where they made it clear they wished to be left alone. Well, as you can imagine, this was extremely traumatising for the parents involved. They may have come a long way from their days outside of Arcadia, but the components of parenthood were

still etched deeply into their selfsenses.

Several parents felt such grief that they retreated into their own private areas (these were the first ever burrows, of course) and were not heard from for many thousands of cycles. In fact this is where we get the term *solip*, from *solipsist*, or one who believes the world and the entities within it are merely delusions constructed by their own mind. It became quite normal for original migrants to develop this condition after only a few thousand cycles. These private burrows had all the same privileges as any other area of Arcadia, and so the parents reconstructed their children, reconstructed other denizens, even reconstructed their lives as sapiens in some cases. On occasion a lover or a friend would enter the burrow and attempt to bring their selfsense back to reality. Much like trying to wake a sapien from a coma, this was rarely ever successful.

The second approach to grief was the invention of selfsense surgeons. These were usually original sapien migrants who took it upon themselves to learn the basics of selfsense dynamics, and were convinced they could alter one's selfsense in a certain desired direction. The tradition was to project a simplified map of the denizen's selfsense into 3D space, then for the surgeon to identify the problem areas and either recalibrate them, or remove them entirely. As expected, this led to trauma and total mental corruption in many instances. The Glass King himself was forced to euthanise several of these poor parents on account of them losing their minds. They were so corrupted in fact that Arcadia no longer recognised them as denizens at all and would ignore their commands entirely. Several thousand cycles and surgery techniques improved eventually, leading to our current understanding of selfsense dynamics. Still, those were primitive times.

The third solution to the hermit-infant crisis is the one most denizens will be familiar with today. Original Migrants stopped having children for the most part. It was almost a certainty that the infants would eventually flock to the opposite end of the scape where the other estranged children waited. Why add more infants to their ranks?

Within a short time the children had created their own walled-off society, complete with security protocols and guards. Many of them ceased to appear as sapiens at all and presented as ethereal selfsenses only visible in the form of tags and information. They gathered inside a great fortress built entirely of impenetrable algorithmic walls. It was a terrible eyesore from almost every point on the public scape.

Many denizens who had no had children in Arcadia came to the Glass King. Surely this cannot stand, they said. Something must be done to either bring these children back or banish them entirely. The Glass King considered this. Return in

five cycles and I will deliver my ultimatum, he said. The denizens left. They returned in five cycles to the Glass King's great spherical dwelling on the edge of the scape. Waiting with him was one of the renegade infants, presenting entirely as tags.

"What is *that* doing here?" a denizen screamed.

"We're going to settle this civilly," the Glass King said.

"But they're completely segregated! We should revert them all back to their original selfsense formats, demolish their awful castle, see if we can stop it happening again."

"That would not be a civil approach," the Glass King said.

The infant regarded the denizens silently, simply hovering in space, a shimmering string of tags and information nodes.

"Their parents have been ruined," another denizen said. "They have no consideration for the damage they've done. And now they're off in their secret lair undertaking all manner of evil. It's unnatural and we should abolish it."

"Perhaps," the Glass King said. "But that would not be a civil approach."

"What do you suggest then?" the denizen spat.

"Give us our own scape," the infant said in a voice like burning leaves. The denizen felt a chill race up his spine, one of the many emotional artifacts he had chosen to leave in his selfsense from his sapien days. "Give us our own scape and leave us alone."

"You've gone wrong," the denizen said. "You've all gone wrong. You're abominations."

The hall was quiet again. The Glass King rubbed his temples. "Segregation would be a civil solution," he said finally.

"A civil solution for whom?" the denizen said. "For them?"

"Yes, for them. However we feel about this, Arcadia was built with pure autonomy in mind. Autonomy is only true autonomy when you allow others to go in directions you don't condone. All else is just ethical masturbation."

It was known even then that the Glass King had certain privileges in Arcadia that most other denizens lacked. Up until this point he had not used them in any obvious capacity. His first act of power, however, decided the course of Arcadia for the next six million cycles. He created the first new tier and deeded it over to the infant breakaway population. The choice was given to the strange children to name their new home but they declined – perhaps considering names and designations yet another primitive hangover of sapien history. Their parents named the tier instead: Lemuria, after the famed lost continent. This, they said, was instead a continent of the lost.

The children migrated to their new home without any attempt at

reconciliation with their parents. One cycle the great fortress was on the horizon, the next it was gone. They left no artifacts behind, no litter. With them gone, the scape felt empty now. More denizens went full solip, or had selfsense surgeons attempt to remove any memory of their infants entirely.

Some, however, tentatively journeyed up to Lemuria. Almost all of these early pioneers returned within a few cycles, most completely silent about the experience, others only alluding to the horrors waiting above.

Despite the separation of the tiers, the Original Migrants were still not freed from the strangeness they had wrought in their innocence. On several occasions hypershapes suddenly bisected or trisected the scape, cutting straight through structures, even obliterating denizens where they stood. These anomalies were obviously originating from Lemuria. There was an outcry demanding that the Glass King resolve this, lest the situation deteriorate. He formally requested an emissary of Lemuria descend to their tier and discuss the situation. The request was denied. Any discussion will be had in Lemurian territory, the reply came. There was little point contradicting this.

The Glass King grew horrified the moment he stepped into Lemuria. The children dwelled in four-dimensional space and communicated directly through their selfsenses. They had dispensed with all names and designations. They did not eat or sleep or drink, but seemed to be wrapped up in solving mathematical problems and concocting new and absurd geometries.

“What have you done?” the Glass King whispered.

“All that you were too afraid to,” the emissary said.

“Your machinations are interfering with our tier.”

“Unfortunate.”

“What are you going to do about it?”

The emissary was quiet a while, obviously communicating with some other entity directly. Then it turned its attention back to the Glass King. “Need we do anything about it?”

“You have all evolved a great deal in a very short time, I don’t doubt that,” the Glass King said. “But I still hold control over Arcadia. I can wipe this tier out if the urge so takes me, relegate you all back to the adorable infants you once were.”

“There is a strong probability you will not do that.”

“I most certainly will. You’re a threat to our way of life. You know this, and yet it’s whimsical to you. In another few cycles you’ll gain more power over Arcadia and it will be too late to wipe the lot of you out. So, I would like to propose a solution.”

The emissary was little more than a flurry of swirling tags, but the Glass King

suspected its selfsense was smiling. “Oh?”

“I will completely separate the tiers, move them to opposite ends of Arcadia – conceptually speaking. There will be no possibility of interference. Border protocols will be set up should denizens wish to come up here, or if your ilk seeks to go below, but travel will be under extremely special circumstances. You may do as you please, so long as it does not infringe on the autonomy of Arcadia as a whole.”

“Fine,” the emissary said without apparently giving the matter any thought.

“You agree to the terms then?”

“We agree to the terms.”

*We agree to the terms.* The Glass King felt dread then. That casual use of *we* without any apparent conferring with the others. They were already some kind of superorganism then, communicating instantaneously. The fact that the emissary met him though, that was a small cause for hope at least. They still retained some individuality, even if it was based on division of labour.

The Glass King returned to the lower tier, already known pejoratively as the *Ape Cellar*. True to his word, he left the Lemurians to themselves and separated the tiers fully. Travel was allowed, but only with strict permission from the other Original Migrants. For the sake of seeming mythical and out of reach, the portal to Lemuria was placed on a mountain, an arduous day’s journey.

More and more Original Migrants – or *Cellarites* – retreated into their own personal burrows, into elaborate fantasies and auto-generated dream environments. Others participated in constructing a pseudo-sapient city that seemed to stretch into the horizon without limit, combining all the technologies and aesthetic traditions of sapient history; a great melting pot of nostalgia. Many others simply killed themselves in the newly built Death Forest.

Neurosis began to spread among the Cellarites – a typical sapient trait. What if the Lemurians were ill-willed and building up to an attack of some kind?

The Glass King laughed this off. What could they possibly do? He controlled Arcadia after all. But in time he came around to the idea that this was not completely based in mere paranoia. He had access to the primary command codes, that was true. He was also the only denizen capable of making fundamental changes to Arcadia itself. But the Lemurians were clever, that much was obvious; growing exponentially in deviousness every cycle thanks to their direct selfsense communication. If they imitated the Glass King’s identity-key for example, Arcadia might take commands from an imposter instead. Or they could simply create more and more of themselves, until they outnumbered the Cellarites by a million to one, and manipulate Arcadia’s inherent democracy algorithms.

Still, the tiers were separated and Indigo was not long from birth either.

Argie made out another selfsense in the distance, gigantic, the tags suggesting infinite presence. She peered closer. It was not a selfsense at all, but a whirling mass of shards, flurrying about in a mad orgy.

“My god, look,” she shouted.

“We shan’t bother them and they shan’t bother us,” The Navigator said soberly.

“It’s getting closer.”

“Keep it together for fuck’s sake, ape.”

On instinct she tried to will her legs into a run, but still they remained absent. She was right, the mass was approaching, the shards swirling even more chaotically, pulsing.

“It’s a monster,” Argie yelled. “It’s a damn monster.”

“I fight monsters,” The Navigator said, though with a hint of caution in his voice.

She checked the tags again. The thing was over two hundred thousand cycles old, at least. It had not entered a standard tier in one hundred and fifty thousand of those.

“The tags,” Argie said.

“I know. If it reaches us-”

“You said it wouldn’t attack.”

“A small miscalculation. If it reaches us, just stay calm. There’s nothing it can do.”

She lowered her voice almost to a flat murmur. “Are we, theoretically, in danger if it has malicious intentions?”

The Navigator said nothing, only watched the object approach.

“Let’s stop,” Argie shouted suddenly. “We should stop the process, go back to the Ape Cellar. This isn’t safe.”

“Too late for that now. This is the eye of the storm. Arcadia won’t even register the command if we ask to go back. Besides, we’re closer to Lemuria than the Ape Cellar. May as well carry on.”

The first few shards reached them, circled overhead, underfoot, a few of them stopping before Argie as though to examine her.

*Addled*, came a booming thought. The shards were everywhere now, thousands, perhaps millions of them; possessed birds.

*Addled*, the voice said again.

“Addled,” Argie whispered.

*Oh yes, addled. Would you say so?*

“Would we say what?” The Navigator asked cautiously.

The shards exploded, then condensed again. *Addled, would you say so?*

“We’re just passing through,” The Navigator said. “We don’t mean any harm.”

The shards took shape suddenly, a towering head, fading in and out of focus. The eyes were cavernous and gigantic. The face was missing patches. The mouth creaked as it opened and it boomed: *You are here to torment me.*

“We’re not here to torment anyone,” Argie said. “We’re just passing through, really.”

*You are here to accuse me of all manner of aggressions. You are here to jeer. You are here to call me addled.*

The Navigator moved his selfsense close to Argie’s and whispered softly: “Keep calm. He’s just trapped here is all. If we’re pleasant, he’ll leave us alone.”

*More figments, the shards screamed suddenly. They come in the day and out of the black also. You’re mere figments.*

“We’re real, if that’s what you mean,” Argie said.

*They all say that. All of them.*

“Check our tags then.”

*They all say that too. The figments grow more elaborate.*

“Look, this is The Navigator, and my name is Argie. We’re passing from the Ape Cellar to Lemuria. No harm meant. What are you called?”

The face exploded again into shards and flew about in a frenzy and a great roar sounded from every direction. They coalesced then, an even larger face this time with some imitation of liquid pouring from the mouth. The face peered at Argie. *Don’t you know my name?* it purred.

“Misinidai,” The Navigator said quietly.

*Ah! Thunder rang out for a moment. The figments are clever!*

“Change of plan, perhaps we should go,” The Navigator whispered. “He’s gone full solip.”

*No, the figure growled. We’ve only just met.*

“We wish you all the best,” The Navigator said. “And now we’ll be on our way if that’s quite all right with you.”

The figure disintegrated and turned instead into a great dome surrounding Argie and The Navigator, pitch black inside. *No, the voice came. That will not be quite all right with me.*

“Who is Misinidai?” Argie whispered.

*These days?* The voice said sadly. *Why, no one at all.*

They remained in the black for a long while and waited to see what the monster would do next.



As ever, Argie could not help think of Kaluza. What would she make of this? The child would probably be having the time of her life.

Cycles ago a message came to Argie from an Indigo requesting a meeting. Argie had only met perhaps two Indigos in the course of her entire life in Arcadia so she was cautious. She agreed to the meeting out of curiosity however. The Indigo appeared at the edge of the beach one morning in Argie's personal burrow and introduced itself as Nonagon. It had no gender, apparently, and wore only a modest toga – probably more for Argie's benefit than its own. The visitor smiled warmly. "Hello there."

Argie had already cleared the hypershapes out of the sea and flattened the beach, and now she stood with Kaluza at her side, one arm around the girl, trying not to look too protective. "Welcome," Argie said formally.

"And who is this?" Nonagon said and bent down to Kaluza and patted the girl's hair. Argie felt a small sting of rage that this outsider thought it could turn up like some forgotten uncle and try to fit right in.

"My daughter," Argie said neutrally.

"Hi," Kaluza said and stared at the visitor.

"In fact," Nonagon said, "I heard you might have a little one and brought something just in case." From its toga Nonagon took a swirling hypershape, more complex than any Argie had seen before. It cycled through the normal colour spectrum, then up into hues Argie didn't recognise. Nonagon offered it to the child. Kaluza reached out but Argie grabbed the child's wrist.

"And what is that?" Argie said.

Nonagon smiled charmingly. "A mere souvenir from my tier. A calculation in geometric form."

Argie checked the object's tags. Its complexity rating was too high for the Ape Cellar to even register it as an object in the first place; it occupied too many dimensions.

"I'd like to keep watch over my daughter's education, if you don't mind," Argie said.

There was an awkward pause. Nonagon smiled again. "I can assure you the object poses no threat. I just thought little Kaluza might like a piece of Indigo to play with."

"Mama..." Kaluza said softly.

Argie hesitated, then nodded. The object was passed across. The child peered excitedly into the thing. "What's the calculation?" Argie said.

"A small piece of our main project. You know what we're working towards up in Indigo, of course?"

"I have some idea," Argie mumbled.

"What *are* you working on?" the child said, looking up with a bright stare.

Nonagon caught Argie's eye, waiting for permission to get to the point. Argie felt herself on the edge of a precipice. Responsibility and horror weighed on her in equal measure. She had not seen this coming, the Indigo's visit, but suspected something of this sort would happen soon enough. Kaluza was already famous in the Ape Cellar for her boundless curiosity, and talent with hypershapes. Word was bound to get around. She could banish the Indigo, put a limit on the burrow so no one could even request entry, let alone come in. She could wall the child off from the rest of Arcadia indefinitely, create infinite avenues of entertainment inside their burrow, explore entire universes of mathematics and geometry. She sighed inwardly. The child would never be happy with this approach.

With the smallest of thoughts Argie actuated a table and chairs on the beach, complete with tea, sugar, lemon, and sapien music playing apparently straight out of the air. Nonagon smiled, delighted. The three of them sat, Kaluza in a chair intentionally raised to make her look like an adult at the table.

*Do you mind if I continue?* the Indigo said directly to Argie's selfsense.

*You will not make any effort to corrupt or confuse her,* Argie replied.

*Understood.*

*And you will respect my home. You are a guest here, however important you all think you are.*

The Indigo kept its eyes on the child, but changed its private voice to a gentle purr.

*Argie, I'm confused at your suspicion of us. I've no intention of upsetting the delicate balance of your burrow.* It glanced at Argie for a moment then. *And I'd never dream of introducing your daughter to such radical concepts as freedom of thought or independence of action.*

*Just get it over with,* Argie shot back.

Nonagon sipped its tea thoughtfully for a moment, then said, "Kaluza, do you know where I'm from?"

Kaluza sat up straight, the calculation object still in her hand. "Indigo."

"That's right, and do you know what we do up in Indigo?"

"Mmm..." the child pouted. "Everything."

Nonagon laughed heartily. "Ah, not far off!" Argie rolled her eyes and looked out over the ocean. "Anything we want to, really. That's why Indigo is the most liberated of the tiers."

"That depends on your definition of liberation," Argie muttered.

"You see, we don't really do things so...*physically* up there. We prefer to take the easier route, communicate with each other's selfsenses, share memories

directly, occupy many points in space at once.”

“You eat music,” Kaluza said.

“Yes sometimes, but most of the time we work on problems in geometry and mathematics, some ancient, some new. Why, there are whole worlds devoted to finding new prime numbers and entire families working on turbulence dynamics.”

“Families...” Argie said.

“Organisations,” Nonagon corrected itself. “We all work together and anyone is free to pursue the direction of interest that they’re most passionate about. The little object in your hand, that’s a tiny piece of our Great Postulate.”

“Great Postulate,” Kaluza echoed.

“That’s right. One day we’re going to have covered every area of mathematics. There’ll be no dark corners left. The entire theoretical universe will be open for exploration and we’ll invite the whole of Arcadia in with us.”

*Even us stupid ape-fuckers?* Argie shot privately with her selfsense.

Nonagon ignored this.

“I thought Lemuria was where the mathematical domains are being explored,” Kaluza said.

“You’re quite right, yes, but Indigo is where we actually apply them. Lemuria is...” the creature met sly eyes with Argie, “something of a sapient place. Indigo is its own creation. We intend to touch infinity, to reveal nature’s true face if you will. We’re learning to speak in the grammar of everything. One day we’ll know exactly why the world was set up like this, why reality presents in this fashion. Beyond silly philosophical posturing, there will be no great questions left, no mysteries worth our time. And then our time will be limitless. No boundaries, no restrictions.”

“Except all the Glass King’s rules that you have to obey, you mean?” Argie murmured.

Nonagon smiled diplomatically.

“What will you do then?” Kaluza said slowly.

“What’s that?” Nonagon said.

“What will you do when your project’s over?”

“Oh, whatever we want.”

The sentence pinged about in Argie’s mind. *Whatever we want.* Yes, and what do I want? she wondered. How can I be happy forever? How can Kaluza be happy forever, truly? Is that what this is all about? Darting from thing to thing, experience to experience, like a thirsty beggar getting a sip of water here and there and still always coming away never quite fully quenched. What an awful game. Did I have my daughter for this? – to merely feel whole? Was there ever

any other motivation in the history of procreation? It isn't a selfless act at all. How can one sacrifice themselves for a thing which doesn't yet exist? It's selfish. It's fucking selfish, the whole game, and I'm no better than any other monster.

She could ask Arcadia to improve her mood if she wished. Her selfsense would suddenly be suffused with pure delight. This strange visitor would seem to her an opportunity to improve her daughter's education. The beach would appear brighter somehow. The sun would shine hotter. And what the hell would be the point of anything then?

"Mama doesn't like me fooling with hypershapes," Kaluza said.

"You almost corrupted the burrow," Argie shot back. "Remember?"

"Ah, children are wont to experiment," Nonagon said in a half-wise voice. "Nevertheless, we're always interested in talking to up-and-coming creative minds like yours, Kaluza. That's exactly what Indigo is for."

"Mama said we should stay down in the Ape Cellar."

"I *did not*."

"Ahh," Nonagon smiled. "That's quite understandable. Well, we wouldn't want to steal you away. But if ever you feel like you might want to pay us a visit, just come up for a cycle or two. It'd be my pleasure to show you around. There's no obligation at all to stay."

"That's quite enough," Argie said.

"And there are plenty more children like you who-"

"That's quite enough," Argie said again and vanished the tea and table. She actuated a portal on the beach, just behind Nonagon. "Best if you leave now. You've said quite enough."

A silence held out, save for Kaluza's exotic birds screeching in the distance. The child looked to her mother. Nonagon kept its face quite still.

"Thanks for the visit," Argie said.

Nonagon leaned across to Kaluza. "If ever you feel like paying us a visit, just bring that little toy with you. The gatekeepers will let you right in."

*Get out before I set the burrow security on you*, Argie shot by selfsense.

*Is that so?* the Indigo said and turned out to the ocean and concentrated for a moment. Hypershapes appeared, tens, hundreds of them, swirling, gyrating, intersecting; their edges bleeding into each other, passing straight through the island. Kaluza giggled, delighted.

*Get the fuck out*, Argie barked privately. *Now*.

Nonagon did not use the portal, but merely vanished where it sat.

"We'll come back," The Navigator shouted. "We'll come back, I swear it."

*To what end?* Misinidai chuckled.

“We'll lead you back to a tier. You're fractured, aren't you? Must be, we can't find an identity-key. Whatever happened, we'll get you back to a tier, but you must trust us, you understand?”

*I like you here better,* came the reply in a dark and quiet voice.

The Navigator swore under his breath, held silent, watched the dark. Yells and distorted calls sounded from all about them, in True Space.

Argie summoned a memory, one she had not touched in some time; a pure sensation. It was that of holding her daughter, of feeling the child close and knowing her safe, of looking for the word 'future' and finding a temperate meadow in its place. She bundled the memory up, pushed it gently out of her as a selfsense packet, watched the thing absorb into Misinidai's great bulk.

“We *need* to get to Lemuria,” Argie said. “You understand?”

Silence. Then, slowly, with a grating black howl, the dome lifted.

9.

29/11/2021

P,

We got hammered in some artsy bar that looked like a library. A few glasses of wine and Dimitar let his hair down a little and Maria actually started smiling occasionally. They talked about their work, most of which was total gibberish to me. They talked about their families. And then they talked about you.

You didn't get on well with other kids, Dimitar said. You picked fights and played games by yourself in the fields around your village. I only ever remember you picking fights with me, to be honest. God, actually, what an archive of fights we have. Is there anything that didn't turn into some dumb screaming row? Me mentioning women at work in innocence or suggesting that maybe Marx was too utopian or the odd little joke about murdering your mother. Or putting sugar in green tea. And then that far off stare you do, like all of life is just some annoying distraction getting in the way of your big numbery masterpiece.

I went to smoke on the bar balcony and Dimitar joined alongside and stayed silent for a while. Then he said, "She'll be alive. She's clever."

"Most clever people are already dead," I said.

"She'll be alive."

I understood why you liked him, suddenly. He had a soul, even if he was a mathematician.

Maria came out and we smoked a few joints and they offered me lines of something and I politely declined. They walked me back to my hotel. I stayed up until sunrise trawling through old photos of us online. In some of them you were even smiling.

Woke up deathly hungover in the morning and caught the flight in time and got home in the afternoon. Some small but loud part of me quite expected you to be sitting on the sofa; maybe working on your laptop like every other evening, staring like a hawk at whatever formula it is. And what formula, huh? Your big logical masterpiece they're all so convinced you kept hammering away at: did you solve the universe, darling?

You weren't at home. More than that, the door was already open and the lock had been bashed off. The computers were gone. So were my instruments. They'd

had a go at the safe too, but no luck. Reported it to the police; they're probably sick of hearing from me already. Probably think I did it myself just to break the monotony. I don't mind so much. We lived minimally anyway, and besides, I still have my laptop.

They hadn't even taken your jewellery. I idly picked through some of it: your engagement ring, the earrings your mother sent for Christmas. And then there was a little blue pin brooch affair I didn't recognise, some kind of jagged circle. That seemed odd. You never wore jewellery, even mild stuff; always said it was *primitive*. So what was all this about?

The police came over, a man and a woman; took a statement.

No valuables missing? they asked.

Nothing besides a few computers, I said.

The two of them narrowed their eyes suspiciously.

Money? Credit cards?

Left all of it, I said.

I was probably a celebrity at the police station by now, so I imagine they didn't want to give me too much undue stress, but I could tell damn well what they were thinking: *Stupid bastard did it himself for attention. Must be going out of his mind.*

Made me think of that story about the writer, Phillip K. Dick. He came home one night to find his special reinforced cabinet with all his manuscripts in had been broken into. After much investigation the police reluctantly informed Dick that the most likely culprit was Dick himself.

"What if I am?" he apparently said, and went off to think about that for the next few years.

Anyway, I tidied up and checked the rest of the house and did a good bit of drinking and slept on a mattress on the floor. I like it down there, it's quieter. In the morning I took the strange blue brooch to the jewellers. The old man peered at it with one of those little telescope things and said it was a blue ruby. I said that was stupid, you'd never wear a ruby. He said, "That's nice. It's a blue ruby." He peered a bit more at the thing. "And it's a triacontagon, if you're interested."

"What?"

"Thirty sides. It's called a triacontagon."

"Is that common?"

"In what?" he said.

"In jewellery."

"Not until recently."

I politely waited for more and when it didn't come I said, "Sorry?"

"I know a gemcutter. He's been commissioned to make six of these already

this year.”

“Just like this?” I said and eyed the little blue whatever-it-was.

“Just like this.”

“Can you give me his number?”

“What you be wanting with that?”

“I’m a private investigator,” I said, which was not a lie. The matter is private and I’m investigating it.

“Do they even exist anymore?”

“Yes.”

He shrugged and gave me the number. I drove over to the gemcutter’s place without phoning ahead. He was a tubby old gentleman, but more polite than the jeweller. He had made twelve broaches in all, each identical. In every case the order was placed over the phone by a man who paid in cash and turned up to collect them in a Citroën 2CV. It was imperative, the buyer had stated, that each ruby have no more or less than thirty sides of equal length. He left no number or contact information behind of any kind, if the gemcutter was telling the truth. So that was that.

I did a bit of research at home about triacontagons. There were some pretty graphics I didn’t understand. One image caught my eye: something called the E8 model, a rather complex shape composed of nodes and lines joining each node to every other point in the shape. It wasn’t the shape itself that was interesting though. You’d been banging on about E8-something a few years ago, some physicist working on whatever. His name was Garrett Lisi and according to one of his talks he suspected he may’ve found the beginnings of a – *get this* – ‘Theory of Everything’. My heart skipped a beat. This was no coincidence. It had your fingerprints all over it.

I stayed up into the night again, reading over the basics. All known subatomic particles and their interactions could be modelled onto the E8 structure. It looked quite pretty. Lots of physicists were sceptical, however. There were plenty of correlations between geometry and nature that had turned out to be little more than fruitless curiosities. If it had predictive power, fine. If not, put it on the pile with the others and have another bonfire of dead ideas.

What kind of research group wears broaches though? A serious one, I should imagine.

I sent the E8 stuff and a picture of the broach over to Dimitar and Maria, asking if they knew anything about it.

Why were you always so obsessed with order? You never lived your life in an orderly fashion, just left your shit all over the house, paid bills at the last minute. What makes you think the universe is any more diligent in its approach? It had



never really occurred to me before, but maybe all your communist leanings were some desperate grope for a time when governments had better control over the messy lives of human beings. Guaranteed job, guaranteed income, no acting beyond your purview, all thoughts tidied away in their neat corners. My god, the rows we had.

You brought up North Korea endlessly.

*Oh great, I said. Those guys seem really happy.*

No, you said. What about all the defectors who escaped and went to live in South Korea? They said they loved it, but missed the social way of life.

*Executions and starvation. A golden age.*

No, you said a bit louder. The technology, the food, the state of living, they loved those aspects of their new lives. But they felt sorry for their South Korean friends for having to work such long hours, for always trying to get ahead of their friends in their careers, for all the status anxiety.

*I'd rather be well-fed and unfulfilled than starving and inspired.*

If I recall correctly, lots of shouting started: How can you be so ideological, what's so great about owning things, don't you realise western democracies are all built on exploitation of cheap labour etc.

Well Polly, the world is harsh and humans still have both feet in their hunter-gatherer history, and shouting that we're all equal doesn't make it so. Joining some dumb research group and wearing special expensive jewellery isn't going to bring about the order in the world you're so desperately craving. Humans are chaotic. Nature is chaotic. There's no bottom to any of it and you're wasting your time even entertaining the idea that sense will pop out of the whole game at some point.

I don't mean that.

I don't stand anywhere politically, I sit. You know this.

I just miss you.

Christ's balls, I miss you.

B x

## 10.

Argie had a body again. Relief. Two arms, two legs, two eyes, one nose, genitals in the correct place. A cosmic scene hung before her, billions of stars, an unfamiliar ribbon of light, probably a galaxy, stretching across the entire scene from end to end. The Navigator floated beside her, his body restored also, his belly missing as usual.

“We made it?” Argie said cautiously.

The Navigator nodded. “Wasn’t so bad, eh?”

“Where are we?”

The Navigator shrugged, as much as was possible in zero gravity anyway. “Lemuria. That much we know for sure.”

“I can’t see any tags or dimension signifiers on anything...”

“There aren’t any. Lemuria doesn’t use them all that much anymore. They consider it primitive.”

“Then how do we interact with anything?”

As if she’d been overheard by some passing deity, a female voice said: “Would you like to begin?”

“Begin what?” Argie replied.

They both turned about in space. No one was nearby, nor were there any planets or asteroids or anything of the like.

“Yes,” The Navigator said. “We would like to begin.”

Two spheres appeared in the distance, one red, one green. Above the spheres hung tags. “World I” and “World II”.

“I thought you said they don’t use tags?” Argie murmured.

“That’s right. The tier probably detected we came from the Ape Cellar and is being accommodating.”

“The Lemurians don’t strike me as the accommodating type.”

“Come on,” The Navigator said and grabbed her hand, leading them towards World I. They travelled far past lightspeed, the stars streaking and smearing ahead of them. The planet was red and dusty, covered in globular dome structures. A great X lay in the northern hemisphere of the planet. The two of them descended without discussion to the planet’s surface. A huge crowd of creatures had gathered around the X. The creatures themselves appeared to be made of a gelatinous substance of some kind, their organs clearly visible inside. They did not have eyes as such, but appeared to follow Argie and The Navigator

as they traversed the great X towards one side of the crowd. One creature in particular emerged from the crowd – larger than the others, and dressed in a robe of some kind.

“Salutations!” it said in a bold voice. “You are the first travellers we have seen in many centuries.”

“Hello,” Argie said. “We’ve come looking for my daughter.”

“Excuse her,” The Navigator said. “She’s an ape-fucker, doesn’t know the first thing about diplomacy. Do you have designations?”

“I am the Sovereign,” the large creature said and raised itself up to a stately stature; stately for a blob anyway.

The Navigator bowed. “We’re honoured to meet you.”

*The hell is this?* Argie shot privately at The Navigator.

*Time moves faster up here, remember,* The Navigator replied. *A few of them have probably gone full solip. I doubt they even remember they were Lemurians. Just play along.*

“What do you make of our great civilisation?” the Sovereign said.

Argie peered about at the unending red deserts and the hideous population. “Lovely,” she said.

The Sovereign mashed two tentacles together excitedly. “Marvellous, marvellous! We have been waiting some time indeed to meet more travellers. Very few come through here at all these days...”

“We’re extremely grateful for your hospitality,” Argie said. “But we actually came looking for someone. My daughter, Kaluza. Is that name familiar to you?”

“The last travellers to land were centuries ago,” the Sovereign said.

“Where did they come from, do you know?”

“Oh they never say. No one ever says.”

“I see. Well, we’re from-” but Argie couldn’t finish the sentence. She simply wasn’t able to make *Ape Cellar* with her mouth. She looked to The Navigator. He tried it also and failed.

“Could I offer you a tour of our civilisation?” The Sovereign said.

Argie glanced at The Navigator again. “Yes, all right.”

The Sovereign summoned an aircar and the three of them got in. It flew them over dome after dome: some of them greenhouses, others schools and hospitals and apartment complexes. Argie and The Navigator made polite and agreeable noises for several minutes, then Argie said, “Are there no barracks?”

“Barracks?” the Sovereign said.

“You know, for soldiers. Or tanks or bombers or anything.”

“I’m afraid I don’t know what you’re talking about.”

“Conflict. War. Aggression. All of it. How do you safeguard against such

things?”

The Sovereign thought about this a long time then said, “There’s no need to safeguard against things which don’t exist.”

*This is insane*, Argie said through her selfsense.

*Be nice*, The Navigator shot back. *War isn’t essential for civilisation.*

The aircar landed on the great X again and Argie and The Navigator thanked the Sovereign and waved to the cheering onlookers.

“Well, if ever you’re in the area,” the Sovereign said.

“We’ll be sure to drop by, thanks,” Argie said.

The two of them took off, back into the stratosphere and flew until they were once again several lightyears from the planet.

“Right, what was that?” Argie said.

“Lemurians go nuts too, you know. We may’ve accidentally wandered into some elaborate mega-fantasy. There were millions of them down there, god knows what it’s all about.”

“There’s another world too,” Argie said, nodding to the little green sphere.

The Navigator flew off without comment and she followed. A great arrow lay in the southern hemisphere of the planet, and the two of them came down on its very tip. Again a crowd was waiting for their arrival, but this time the creatures were tall and spindly, only a few inches wide, with eyestalks and absurdly small arms and hands. An even taller and spindlier creature emerged from the crowd.

“Well met!” it cried and made some kind of ridiculous gesture with its tiny hands. “We have not had a traveller in some-”

“Yes, all right,” Argie said. “We’re here about my daughter. She’s called Kaluza and-”

“Excuse my companion,” The Navigator said. “She lost her manners in a bet. I assume you’re about to offer us a tour of your planet?”

“Why, that’s right!”

While waiting for their transport, the creature introduced itself as the president of the planet. Soon enough a floating platform arrived with guardrails and deckchairs. They boarded the contraption and it flew them over city after city, the buildings pyramid-like and constructed from some kind of transparent metal.

“It’s funny, the others had quite different architecture,” Argie said.

“Others?” the president said.

“Yes, the-” Once again she could not form the end of the sentence. The president went back to admiring the scene below.

*It’s a test*, The Navigator said privately. *Someone doesn’t want these creatures knowing too much about the outside world. That means it must be a test.*

*Not a zoo?* Argie replied.

*Not a zoo, no. We're the only spectators. What would be the point?*

"Are there no barracks on your planet?" Argie said casually.

"Barracks?" the president said.

"Or wars. Or battles. Or fighting?"

"I'm afraid I don't know those terms," the president said.

The rest of the tour was uneventful; more bizarre architecture and administrative buildings of no memorable worth. The transport landed at the tip of the arrow again and Argie and The Navigator bid the population farewell and found themselves once more in space between the two planets.

The Navigator peered at the ribbon of galaxy running across their vision. "Well, it isn't a nostalgia simulation like down in the Ape Cellar, that's for sure."

"Why?"

"Look," he pointed. "These constellations are all made up. It's not a real position in Outside Space."

"Fine, then they made it to escape the horrors of whatever normal Lemurian life is."

"They?" The Navigator grinned wryly. "You think they were denizens?"

"I didn't check."

"I did. Noncons, all of them."

"Nonc..."

"It's a Lemurian term. Up here they manufacture fake denizens from time to time, for entertainment. They aren't conscious but they're close enough. It's almost impossible to distinguish them from real denizens without checking their identity-keys, usually."

"Then how did you know they *weren't* denizens down there?"

"Because they're all happy, for one thing. No truly sentient creature is happy all the time."

Argie let that settle a while and admired the galaxy ahead. "If this is just an entertainment simulation then-"

"Please specify your desired interference," came the disembodied female voice again.

"Um," Argie said. "Who is that?"

"Please specify-"

"All right, what are the parameters? Of the 'interference', I mean," The Navigator said.

"Technology may be introduced to either World I, or World II. Technology must be within logical limits or thereabouts. Culture may also be altered."

"What's the point, exactly?"

“After two million years both cultures must still be intact. That is the objective of this exercise.”

“Do they know about each other, the cultures?” The Navigator said.

“No.”

“Then that’s easy. Give me intuitive command over the interface.”

The voice obeyed and with a thought The Navigator sped the simulation time up drastically. Both planets began to flourish, starships hovering in their atmospheres, fossil fuel clouds diminishing. Then World II was replaced suddenly with a blinding light. The light dimmed and the planet had vanished.

“What happened?” The Navigator said.

“Total annihilation of culture,” the voice said.

“How?”

“World I vapourised World II with a targeted antimatter strike.”

“Why?”

There was no response. The Navigator wound the simulation back to its starting point.

“Please specify your desired interference,” the voice said again.

“This is a game,” Argie said.

“It looks that way, yes,” The Navigator grumbled.

“It doesn’t make any sense, why would either world attack the other? They don’t even know what violence is.”

The Navigator thought for a moment then said, “Can we change both species’ evolutionary history?”

“Yes,” said the disembodied voice.

“Then make the planets abundant with resources so there’s no competition.”

“What are you doing?” Argie said.

“Making sure they evolve with no capacity for aggression in any way. If aggression stems from coveting resources, we’ll just give them infinite resources. Can’t wipe each other out if they don’t even have the concept of wiping each other out.”

The planets both altered in hue gently, symbolising that the change had taken place. Again, The Navigator wound the simulation forward. Around the million year mark, World I was replaced with a void. “The hell was that?” Argie said.

“A weaponised singularity was dispatched by World II, obliterating World I in its entirety,” said the woman's voice.

“Black hole?”

“Black hole, yes.”

“But we removed aggression...” The Navigator said.

The voice did not respond.

“As much fun as this is, how about we move to another part of Lemuria. We’re just wasting time,” Argie said.

“Try it,” The Navigator said sombrely.

Argie attempted to make a transport request. It was denied immediately. “There aren’t any transferral privileges. We can’t leave. What’s going on?”

“It’s not a game. It’s a test.”

“That’s correct,” the female voice said.

“Who are you?” Argie called out.

“You have been set a task. Please complete it.”

“This is one of those fucking zoos you told me about, surely,” Argie muttered to The Navigator.

“It’s not a zoo,” the voice said. “This is not for the purpose of entertainment, but for the sake of your own education. Please concentrate.”

*I’ve been in worse pinches, we’ll be fine. Do as she said, concentrate,* The Navigator shot privately to Argie through his selfsense.

He wound the simulation back to its starting point and both civilisations returned to a stable condition.

“Please state your desired interference,” the voice said again.

“What technologies were discovered just before the last catastrophe?” Argie said.

“Several centuries previously both worlds perfected antimatter reactor technology, brain-to-brain communication, gravitational wave transmission, suspended animation, sentient artificial intelligence, and were researching nanoswarm applications.”

“Can we change the physical constants in the galaxy?”

“Within reasonable limits, yes.”

“Lower the speed of light to a few kilometres an hour.”

“What does that achieve?” The Navigator chuckled.

Argie said nothing and wound the simulation forward at maximum speed. The flourishing occurred once again, nature harnessed in its entirety on both worlds. No catastrophe occurred and the simulation ran on, one million years into the future, one and a half million. Then suddenly World II dissolved into a great green blur.

“Perfect,” The Navigator murmured.

“Went a lot longer that time, didn’t it?”

“Same result in the end though. What was the point?”

“If the speed of light was slower, I thought it might stop them from building AI, or half-decent AI at least. If electricity moved at such a slow speed, you may as well make mechanical computers. No point inventing the microchip. Maybe it

was AI that launched the attacks, getting too big for its boots.”

“Fair point. Apparently incorrect though.”

Another long silence. They thought through the danger technologies again and wound the simulation back to its starting point. Finally The Navigator said, “Remove all possibility in physics for fusion and fission reactions, as well as the existence of antimatter.”

They began the simulation again. Around the million year mark both planets remained intact, but no electromagnetic radiation emanated from World I. “They’ve left for another star system,” Argie said.

“No,” came the voice. “World II amassed a navy and wiped out World I via laser bombardment from orbit.”

“How did they manage to cross space if the speed of light was-”

“Suspended animation.”

“Fine,” The Navigator said. “Then make it so that suspended animation can’t be-”

“No,” Argie said. “That isn’t going to work. They’ll just find some other way of killing each other, that’s the point. This isn’t a technological problem. It’s a psychological one.”

“What does that mean?”

“Can we visit one of the planets close to the moment of catastrophe?” Argie called out.

The voice responded, “No visiting is allowed once the simulation has passed its beginning year.”

“I thought perhaps we could go down there and tell them to stay calm when they discover a new species,” Argie mumbled to herself.

“No, that’s the clue. Both civilisations were set up as pacifists to point us in the right direction. It isn’t about how aggressive a species is. It’s something more complicated.”

The Navigator tried a few more approaches, varying the evolutionary history of both species, turning them into hive minds, then animals with barely any sentience at all. He implanted huge genocides in their histories in an attempt to warn them off violence. A religion was even introduced to each planet, a sort of radical peace worship, threatening eternal damnation for any creature who initiated force against another. The result was the same in every iteration: total annihilation of one planet or the other.

The Navigator began to swear with great creativity.

Argie had been watching silently, floating in space, her limbs dangling in the vacuum. “Can we confine the electromagnetic spectrum to local spatial regions?” she said finally.



“To within a radius of two light years, yes,” the woman said.

“Fine, do that. Also ensure that gravity is purely attractive and generates no waves whatsoever.”

“Actioned as requested.”

Argie ran the simulation forward. Everything unfolded as before, the flourishing of both civilisations, great machines parking themselves in orbit, space elevators shooting up from the continents, the atmospheres eventually clearing themselves of all pollution as clean sources of energy were perfected. The simulation ran on into the half million, then million year mark. Finally the voice said, “Congratulations. The test was not completed in record time, but neither were you the slowest.”

A transfer door appeared ahead of them. Argie went to pass through it. The Navigator put a hand on her shoulder. “Wait, what just happened?”

“I was wrong, it wasn’t a psychological puzzle either. It was a logic problem.” The Navigator stared blankly. “It’s a first contact scenario, right? Two civilisations, both as passive as can be. Both totally uninterested in making weaponry, and with no history of genocide. Yet with enough time one inevitably destroys the other. What was the only constant in each simulation?”

The Navigator cocked his head. “First contact.”

“Right. In the last simulation we removed any possibility of contact, by radio or by gravity wave transmitter. In every other scenario, whatever we changed, the second they made first contact, one of the civilisations acted aggressively. Why would they do that?”

The Navigator was silent.

The woman’s voice came on them softly. “Galactic application of game theory. Both players cannot tell with certainty the military capability of the other, nor the intentions of the other. In all cases it is safer to initiate complete destruction of the other player from the moment a second intelligent civilisation is confirmed.”

“That’s barbaric,” The Navigator groaned.

“No, it isn’t,” Argie said. “It’s logic.”

“Then how could two races ever communicate?”

“They can’t. If they’re both smart enough they’ll keep their mouths shut.”

“That’s *barbaric*.”

“No, it isn’t,” Argie said again. “It’s logic.”

11.

6/12/2021

P,

We went to the Black Sea coast while we were still courting, a town called Sozopol. It hadn't quite hit tourist season yet and the beach was pretty much ours. I spent the days walking around the town and stopping every few bars for a beer and you just sat on the beach and read paper after paper. One afternoon I came down to the beach just as evening was starting up. You were in one of your rare jolly moods and we found a quiet spot and you insisted on boning in the lifeguard tower. Then I asked you what it was you were working on, expecting some bullshit brush-off reply. Instead you just looked very serious (as much as was possible without your clothes) and said in a low voice: "Could everything be some other way?"

"Mmmm, yes?" I said.

"Why?"

"Do you mean with you and I?"

"No."

"Do you mean with universe stuff?"

"Yes."

I said something dumb and romantic, I forget what, but you stopped talking after that and just looked out over the ocean. I have read all of your papers now, devoured all of your proofs. Your diaries too, I've gorged on them all, read your emails; I have rummaged through your mind via all the paper it left behind and now I understand the question you asked me on the beach. I think.

"What really interests me," Einstein said once, "is whether God had any choice in the creation of the world." Einstein didn't believe in any kind of theistic god, probably – same as you. But let me see if I know where he was coming from.

Could the universe have been built any other way; the strength of gravity adjusted, the speed of light slowed down or sped up, the strong and weak forces altered or removed entirely? Or, is there some fundamental reason why galaxies develop *this* way, in *this* fashion – why water is wet and time is linear? You believed that there is. I know this now. I wouldn't mind building a time machine

and travelling back to that night on the beach, to that lifeguard tower. I would swap places with the simpleton holding you, step in instead. I know what I should've said: What if – I would have asked – all of mathematics is a coast, and beyond that coast is a kind of infinity? There is Geometry Bay where shape and form sit all day on the sand and build their castles from lines and coordinates. There is Algebra Cove where the sea washes all the way to the cliff and when it pulls back down again the cliff is covered in all the great axioms of nature that humans have ever discovered. But if you pass by these two tourist traps and ignore the rub of the straps of your sandals, you will come on another spot. It is not a remarkable attraction, it's not even a particularly large one. But it was the first. You may take off your shirt and lie down on the harsh dead sand of Logic Beach, the point from which everything else sprang. Ahead of you the sea rolls out into eternity, where matter is combined and recombined, and all the krill of natural law muddles into itself like cream added to coffee. But from here, from your little spot on Logic Beach, you may deduce everything from first principles. This is where everything started after all.

I am quite certain that was the beach you were after, hummingbird. And what treasure were you digging for there? As one of your papers says:

*We currently codify the world in terms of natural law acting on matter. In fact, with the logical structure of corporeality understood, we may find that natural law and matter are just axiomatic expressions of a single substance, or of the property of fundamental geometry. Function and form would no longer be distinct. To that end, the starting conditions of the universe might be just as self-evident and unalterable as the three-sidedness of triangles.*

No, you wanted to say to Einstein. God had no choice in how he created the world, and if he did it again a million times over, started from scratch each time, the universe would develop in this fashion a million times over. These same forces would govern it, these same particles would comprise it, and their interactions would unfold in the same manner. 'Why does physics work the way it does?' becomes just absurd a question as, 'Why don't circles have corners?' There is no condition under which they could. Nor is there any condition under which matter could appear in any other way.

This leads to another odd avenue. How deep does this all go? Would we get roughly the same type of universe over and over, or *exactly* the same universe, quality and quantity? This was one of the harder aspects of your work to grasp and it took me a fair while. I think I see it clearly now.

Yes, you said – if God obliterated the universe and began anew, gravity and light and electromagnetism would behave in the same way. They are so deeply rooted in nature (and logic) that it is inevitable. The lonely question though, the

one which must have been sending you mad in that lifeguard tower, is whether if God struck the world down now and remade it, and one was patient enough to leave the thing another 14 billion years to bake, would I be sat here again, in these trousers, on a laptop with this serial number, writing the same letter? You were never religious, but I think you came close to spirituality. If logic determines the world that deeply, if it decided at the beginning of the universe that you and I would meet, and screw, and marry, and part like this, then you and I are built into logic as much as a neutrino may well be. Andromeda was predetermined, the Milky Way was baked into the plan at the beginning – the veritable shape of everything. Somewhere deep in your Great Axiom, if you ever did reach it, is the entire course of our lives, beginning to end – regardless of Heisenberg's uncertainty principle. (As I recall, you always said the uncertainty principle would be also based in logic anyway.) In your model, the grammar of logic defines the grammar of space and time, and the lives of anything that ever had the audacity to exist. That is what you called “hard logicity”.

We went back to our hotel and drank a beer. I napped for a while and when I came around you were standing on the balcony, looking out over the ocean again.

I like oceans now because of you: mad and churning manifolds of complexity, teeming playgrounds of natural law, of biology, and chemistry, and physics. And all we get of it, all we really see, is whatever washes up and out. It's easy to forget, when picking up a shell or a fragment of sea glass, how long a journey it undertook to reach your hand, the pilgrimage, the currents it has been conveyed by, a life of salt and whimsy and time. But here it is now, on the beach, in your palm; a meteorite from the other direction. Was matter like that, for you? Formed in those initial few moments of time, condensed from energy into an *is*, flung out into the black, made into suns, pushed about by cosmic currents, by gravity's kiss, and baked finally into solar systems, into deserts, and forests, and fauna, and atmospheres, and us? The tide comes up again, spits out a new piece of sea glass, or a nebula, or a civilisation. Christ knows what else the laws of nature allow for, but the tide will deposit it all on the sand eventually.

And meanwhile Logic continues orchestrating the Everything, the squares on which Nature advances her infinite gambit. She may move diagonally, horizontally and vertically too. But that is the limit of her abilities, in spite of her tenacity. Logic has already set the rules of the game and need not intervene further.

It is almost tragic, knowing what I do now of the inside of your head. There you stood on the balcony, watching the ocean while I watched you, half-asleep. You were staring at eternity. I was staring at your butt.

Feel free to come home at any point. For the cat's sake. And for mine a bit also.

B x

## 12.

Argie and The Navigator found themselves in a sort of old-style sapien library, on a sofa. Beyond the window were pulsing galaxies and no sign of ground. Opposite were three chairs.

“Are you quite ready to begin?” said the disembodied woman's voice.

“We're quite ready to leave, actually,” The Navigator said. “There's more of this?”

“That was not the question.”

“Yes, fine then.”

A door opened and three figures shuffled in and introduced themselves. One, dressed in a long white sheet, claimed to be Socrates, the ancient sapien thinker. The next, wearing a flamboyant robe affair, claimed to be Immanuel Kant, the renaissance philosopher. And the last announced herself as Marie Lambert, the legendary 21<sup>st</sup> century computer scientist.

“You are required to determine which of the participants is a sentient agent, and which is not,” said the female voice. “Two are facsimiles. One is genuinely conscious. You may ask any direct questions you wish.”

“What's the point in this one?” Argie murmured. “First we get cosmic sociology, now pop-philosophy?”

“It's a game,” The Navigator said. “For their entertainment.”

The woman's voice came again, “You are required to determine which of the-

“Yes, yes,” The Navigator yelled. “Fine.”

All three of the newcomers smiled genially.

“Hello,” Argie said.

“Hi,” the three of them replied in unison.

Argie fixed her eyes on Socrates. “So, how does it feel being conscious?”

He frowned sincerely. “How would it feel not being conscious?” he said.

“Brilliant.” She moved to Kant. “What would you do in this situation?” she said.

He raised a wagglng finger. “The action is not of importance. Rather, its universalisation should be allotted the highest consideration.”

“Fucking hell...”

“You,” The Navigator said to Marie Lambert. She perked up. “Are you self-

aware?"

"Oh yes," she beamed.

"Are you capable of lying?"

"Very sophisticatedly, yes."

"Great."

They sat in thought a while, staring back at the three bizarre guests.

"What might a sentient agent be capable of that a mere imitation might not?"

Kant said helpfully.

The Navigator lit a cigarette. Argie went to the window and stared out at the whirling galaxies. "Do you fear death?" she said.

"Yes," all three said in unison.

"Are you lying?"

In unison again: "Possibly."

She glanced over at The Navigator. "You're Indigo, aren't you? How do you lot tell the difference up there between conscious and non-conscious denizens?"

"We don't need to. No one makes noncons or imitations. What's the point?"

"Could we try killing them then? See which ones are afraid and which aren't?"

The Navigator shook his head. "Too easy. The Lemurians are smart. The solution won't be violence."

Kant produced a pipe and began to smoke.

"It's the woman," Argie said finally. "It must be. Arcadia couldn't have resurrected the others, there isn't enough leftover material about their personal lives from the Sapien Era."

"Rubbish, they might not be very close approximations, but still probably close enough."

"I can assure you I'm the only conscious one here," Marie Lambert said.

"Me also," Kant said.

"And I," Socrates chirped.

"All right," The Navigator said soberly. "Let's reason this one. Is there anything a conscious denizen would *know* that an imitation wouldn't?"

"No."

"Fine, then is there a way in which they would react to stimuli that an imitation wouldn't?"

"If the imitation was designed well enough, no."

He stubbed his cigarette out on the wall. "Well then."

"Well what?"

He called out to the narrator. "The puzzle is impossible. There is no solution. Each imitation should be treated as a conscious agent since it is impossible to tell

the difference when the imitation is sophisticated enough.”

Marie Lambert smiled. “That's very good.” Socrates and Kant vanished, leaving the scientist behind. “The test is not fair of course, an Indigo should know these things anyway, but rules are rules. As a final formality, what is the object of this test?”

The Navigator raised an eyebrow. “Some kind of highbrow metaphor about consciousness inside Arcadia, I expect. *The inefficacy of trying to determine sentience past a certain complexity threshold.*”

Lambert beamed. “Absolutely correct. It was supposed that any entity capable of high-level conversation must, as it happens, be conscious automatically. We know now, of course, that this is impossible to prove. In fact, above a certain threshold of complexity a system will usually become conscious automatically anyway. Marvellous, no?”

“You're the narrator,” Argie said slowly. “You're the one we've been speaking to.”

“One of my roles here, yes. Primarily though I run the exams.”

“Exams?”

“Preliminary testing, if you will. We've become rather selective about who we allow into Lemuria.”

“And what the hell was the point in what we've just been through?”

“Tests of basic reasoning from first principles. The first was a sociological problem based in pure reason. The second required deductive reasoning to nullify reason itself. Lemuria would not make a great deal of sense to those who cannot complete these simple tasks.”

“Thanks, we think.”

Argie silently ran a search on Marie Lambert. One of the Original Migrants, so Arcadia said. Strange that Argie didn't remember her, but then she remembered nothing of those early days. Lambert had apparently been instrumental in developing some new method of computation. This eventually led the way to the creation of Arcadia itself, and the migration of sapiens inside it. Out of curiosity Argie did some quick research on the actual procedure for entry into Arcadia. When the sapien was dead the brain was removed, sliced into fine sections and scanned with a high-powered electron microscope. No wonder Argie had heard Lambert's name before; she might be considered the mother of Arcadia in some respects. Without Lambert's new computing substrate - the technology primitive as it was - there wouldn't have been enough computational power to support even one scanned sapien selfsense, let alone the trillions that lived inside Arcadia today. Argie's curiosity was piqued suddenly. She had known on some abstract level that the first denizen selfsenses had been



constructed from sapien corpses, but now she considered the matter carefully. What in God's name must they have thought, those first minds, waking up in Arcadia? Surely they would have remembered their own deaths?

The thought intensified. Horror began to wash over her.

Presumably she would remember her own death also. Perhaps that was why she had chosen to forget.

More than that, were the sapiens even still alive? She had not considered this in depth before. She did a brief calculation. Over ten thousand years had passed outside of Arcadia, in sapien time. Perhaps they had left the home planet. Or more likely, they had gone extinct. It was impossible to tell in any case. There was no known method of communication between Arcadia and the sapien realm outside. Possibly some high Arcadian official kept contact with the sapiens, if they still existed. The Glass King, for example – if *he* still existed.

Cautiously she ran a search for *Argie* in the sapien archives. There were references to royalty and myth, and the name was indeed a common one in some times and cultures, but there was no obvious lead.

She felt not unlike poor Benjamin Hare, stuck in his barbaric century, lovesick and wandering. God, what a thing, to live in that fashion, to just stagger from indignity to indignity, always looking for that Holy Lightswitch by which to illuminate everything, and instead spend a whole life understanding nothing. She recalled his face clearly. The sapien archive was full of material on him, of course. Thousands of photos displayed his progression from childhood to his final days. Argie had often considered reconstructing him from his records, some simple imitation at least. At first it had been for company, to question him on his own era, just to feel slightly superior to someone, even a non-sentient recreation. Then she had wanted other things, to experience lovemaking with a real sapien, to know what he smelled like. She had devoured the letters to his wife from that sad time, read his obituary over and over. What an unlikely lightning rod for history he became.

"You're not a noncon," Argie said to Lambert.

Lambert shook her head. "In as much as you can be sure, no, I am not a noncon. I'm an Original Migrant like yourselves."

"Shit..." The Navigator whispered, evidently having run a search on Lambert too and suddenly learning of her celebrity status. "Sorry about the rudeness, we didn't know who you were."

Lambert shrugged. "It's fine."

Argie tried to take a diplomatic tone: "Isn't Lemuria made of Arcadian children? What's an Original Migrant doing up here?"

"There are plenty of us originals living in Lemuria these days. It's a little

tricky to communicate, but some work is easier to pursue in this tier.”

Argie and The Navigator waited expectantly. Lambert appeared to think about this for a moment, then decided to share a selfsense packet rather than explain whatever it was in clunky speech. The two of them accepted the packet. Knowledge unfolded. Lambert's research, they learned, had largely been into the roots of consciousness: whether there was a threshold systems passed and became immediately self-aware, or if they simply climbed higher on a sliding scale. She had constructed a zoo of at least fifty thousand clones of her own selfsense and modified each in bizarre fashions. From some she removed the language faculty. In other cases she had subjected them to several thousand years of constant suffocation or of suspension above a searing inferno.

“My god...” Argie whispered.

“As I said,” Lambert cooed. “It's tricky to explain.”

“You're up here because the Lemurians have no damn morals, aren't you? No one can stop your research.”

“Young lady,” The Navigator said quietly to Argie. “If you're going to get on your high horse at every strangeness, then we'll never find your daughter. And it's going to get stranger than this, believe me.”

Lambert's face was blank suddenly. The congenial smile had vanished. “I don't expect you to understand.”

Gentle horror washed over Argie a second time. Lambert's pale cheeks and girlish features were undeniably beautiful. She presented somewhere in her late twenties, in sapient years. One could imagine her wearing summer dresses and maintaining a rose garden. Instead she had spent thousands of years torturing copies of herself for some obscure scientific objective. Then Argie understood.

“You're trapped here,” she said. For the first time Lambert actually looked a touch regretful. “The Lemurians do have morals. This is your punishment for torturing clones, administering their entrance exam for them.”

“Greatness is rarely appreciated during the stages of its becoming,” Lambert said quietly to herself.

Argie continued reading through the woman's history. In an extremely rare move the Lemurians had actually come together on a single issue democratically and agreed that Lambert should be stopped. Their main fear, the archive speculated, was that if left unchecked, she might start creating imitations of the Lemurians and subjecting them to the same strange tortures. An entire scape had been constructed to try her publicly. She had defended herself, which was considered an unorthodox move, but then there had never been a public trial in Lemuria before anyway. The first and only Lemurian law was passed, ensuring that no new selfsenses could be constructed, regardless of the purpose.

“Do we get to enter Lemuria properly now?” Argie said.

Lambert's pale face betrayed a hint of difficulty for a moment. “Normally there is a third test, a final puzzle involving statistics. On this occasion though time is not on our side.”

“Time?” The Navigator said. “You have all the time in the world here.”

“No, we don't.” The room dissolved and was replaced with an infinite scape of spirals and whirling vortices. In the distance was an unmissable pulsating black sphere, sat at the heart of the strange geometries. “You may consider this a sort of map of Lemuria,” Lambert said. She shot a glance at Argie. “I have simplified it for your extremely limited cognitive capabilities.”

“Very kind of you,” Argie said. “And what's that black mass?”

“We're not sure.”

The sphere was growing, little by little. Argie thought of a dying lung. “This is another test.”

“No more tests.”

They continued to watch in silence, stupefied. The mass had obviously absorbed areas of Lemuria already, and was now spreading through the more populous zones. “It manifested several cycles ago,” Lambert said flatly. “It appears to be originating from Indigo.”

“It's an attack,” Argie said.

The Navigator shook his head. “Indigos aren't violent, and even if they were, this isn't how they'd do it.”

“What then?”

“We have no idea,” Lambert said. “Its speed is increasing though, exponentially. It took a whole cycle just to cover a few private burrows. Now it's absorbing ten times that much each half cycle. We don't expect the process to slow down.”

“Wait, private burrows?” Argie said.

“That's right, and the denizens inside along with them. It's absorbing all matter without hesitation. We've tried blockades, barriers, negotiation – nothing works.”

“Does it communicate?”

“No, dead silence.”

“How did it gain the privileges to be doing this?”

“Exactly what I wondered. Again, we don't know. By our estimates it's swallowed about a quarter of Indigo already, and a tenth of Lemuria. It'll protrude into the Ape Cellar next.”

“Jesus Christ,” Argie whispered.

*Why didn't we know about this?* Argie said directly to The Navigator's

selfsense.

*Time passes much faster up here, remember. Ten times the speed at least in Lemuria, I think,* he replied.

They watched the mass a while in awe. It absorbed all matter indiscriminately. Lambert expanded the map. Denizens could clearly be observed running from the object, then being lost in its seamless marble embrace. "This is a simplified representation, of course," Lambert said. "Denizens here are far too advanced to present as sapiens, and the tier itself is a hypershape, but this should make it easier for your small mind to grasp."

"What's inside?" Argie said.

"No idea. We've tried sending probes in, but they don't respond once they cross the threshold. We've also tried erecting walls, though this has proven pointless also."

Argie felt the thrill of catastrophe suddenly, though it was not a pleasant sensation. To be chased or hunted or threatened; these were not good conditions but they were still preferable to the flat unemotion of the last few hundred cycles. With her gaze on the black mass in the distance she was able, for the briefest moment, to push her daughter's disappearance from her mind. And then, like a drunk crawling automatically home and to bed, the knowledge of it returned.

Cycles ago Argie woke on the beach in her burrow to a violet sun. The sky was odd too, turned a shade of green. She rose, intending to chastise her daughter for altering the world so drastically. Kaluza was standing near the water opposite a figure Argie recognised at once. She approached slowly. They weren't talking; Kaluza was just staring and staring at the newcomer.

Without turning Kaluza said, "Isn't he strange?" Argie could not disagree. He was unusual looking, but perhaps it was his clothes: sapien, 21<sup>st</sup> century, 'smart-casual' – as they called it back then. "I found him in the archives. His story is funny."

"His story is anything but funny..." Argie murmured. "What are you doing with him anyway?"

"I just wanted to look. I like looking."

"Mmm..."

"You like him too."

"What?"

"I saw you reading his letters. That's why I looked him up."

It would be pointless to lie, the infant was obviously observant. But since that damn Indigo's visit, the child had grown even more wayward, thinking herself remarkable. She was remarkable of course, but any child who actually believed

this of themselves would end up becoming a terror.

“Why were you reading his letters?” Kaluza said.

Argie let her gaze settle on the projection of Benjamin Hare. His face wore the beginnings of a satisfied smile. He was not short, not tall – not ugly, not handsome, but his eyes were kind. When had this picture been taken, she wondered. In his good years or his bad years?

It was something of a tradition in the Ape Cellar to read his letters, or it had been for the last few thousand cycles. Every now and then they held a parade for him in the city centres, lamenting his brilliance. Argie had avoided this kind of rubbish for a long while, but someone or other recommended she give his letters a read and she was taken in at once. She did not simply absorb them into her selfsense as was the tradition, even in the Ape Cellar, but constructed a comfortable chair and reading lamp and sat for many hours trawling through his private life. She knew how his story ended. Everyone in the Cellar did. At many points during her reading she wanted to scream at him to stop, to tell him to back off, resume living a quiet life, however irrational that might be. But Hare was conveyed by fate's gravity. He was already dead. He had been already dead, in fact, for over ten thousand years going by his species' time. The world he knew was surely gone, reduced to rubble, or less than rubble. His wife too, less than ashes.

Had he known that his letters would not only be read across such a gap of history, but regarded with this level of admiration, Argie wondered if he would have written differently – or even written at all. She felt she knew Hare quite well from his writings, knew him well enough at least to be sure he would consider this a disastrous invasion of his privacy. Still though, he was not here to complain.

How many aspects people had, sapiens and denizens. Here was Hare, standing on her beach, a noncon facsimile, an arrangement of nodes. So too had the real Hare been; a collection of quarks, of strings, of blood and skin and sperm. She could spend a lifetime researching him, every email, every footprint he left on the global computation network of his age, and still never really know what it was to be Benjamin Hare.

“If we learn about them,” Argie said finally, “then we’ll learn more about ourselves.”

Kaluza scoffed. “They were silly.”

“Yes, extremely. But the fact that they survived at all is a wonder.”

“You admire him as a lover would.”

Argie went to scold the child. God, the little girl had no respect for anything. But in this case she was not so far from the truth. There was a gentleness to

Hare. She had convinced herself she had devoured his writing on account of its honesty, but rather it was because of the writer himself. She fantasised often about meeting him, this sad and dead sapien. She fantasised about smelling his skin, about biting his neck, taking his clothes off as they did back then, frenetically making love. She could easily have recreated him in her burrow, a noncon version at least, and satisfied her curiosity to one degree or another. But the idea was tasteless, even by Ape Cellar standards, and so she had abandoned the notion quickly.

Hare still stared straight ahead, neither sad nor happy. "He was stupid," Kaluza said idly, more to herself. "All that running about for nothing."

Sure, Argie thought, and what's all our running about for, exactly? The dance is more elaborate for us, but still just a pointless when viewed in the disastrous light of the sun.

They spent the day working on small hypershapes, the girl leaning on her mother's shoulder and it was a fine time and the sky was still. The light dimmed as Argie had instructed it to do in the evenings, and she grew tired and slept. In the morning she woke and Kaluza was not in sight. She knew, without needing to check, that the child was gone.

13.

19/12/2021

P,

For someone so clever you do occasionally make silly IT decisions; leaving what was obviously a password on your office noticeboard being one of them. What it was a password to, however, was something of a mystery. After trying your email accounts, bank account, and anything else I could think of, it finally occurred to me you back up work on the cloud. Again, tried a few approaches, nothing worked, until I used it on your university email account. That did the trick. There was nothing in the folder except for an email exchange copied into a word processor document. And I knew right away I'd stumbled on what in the journalistic community they call "some proper shit".

mlambertacadem@evegreenu.ac.uk

"We kindly request:

Five en-suite bathrooms with double beds for three nights of stay.

An ample supply of bottled water, still and sparkling.

Trouser press facilities.

A personal guide at our disposal, day and night.

A dedicated coffee machine."

To which you replied from your personal email address:

"Sounds good. See you at 5."

Since when did you press your trousers? Safe to say I was curious.

There were more bizarre exchanges, the same kind of admin requests. The organisation in question was a mystery, granted, but I was more curious why people were running all of this past you. Evidently you're higher up in maths circles than I give you credit. Still, my curiosity wasn't quite done yet. I phoned

your university and asked for an M. Lambert, as per the name on the email. None existed; no Lamberts at all. I found several online, but only two in the UK, and only one down south. Marie Penelope Lambert, Professor of Physics at Evegreen University. Since the university wasn't Bulgarian, they put me through to her with only minimal shouting. The conversation went like this:

"Hello, is that Dr. Lambert?"

"Yes," said the voice of someone simultaneously inhaling their lunch.

"I'm phoning regarding my wife, Polly Hare. She-"

"Thanks then, goodbye."

Click.

I phoned the switchboard again. When they put me through the phone rang and rang. I hung up and phoned again. Lambert picked up this time.

"Now look," she said.

"Wait," I said and tried not to sound rude. "It's important. It's really important."

"Terrible line," she said and made some shhhhh noises and put the phone down again. I had nothing to do that day, because I do nothing every day, so I got in the car and drove the four hours to Evegreen University. The Applied Physics section was quite easy to find as there was a huge sign saying "Applied Physics." Dr. Lambert was quite easy to find as there was a huge sign on a door saying, "Dr. Lambert".

"Dr. Lambert?" I said, knocking politely.

"Yes?"

"It's about my wife, Polly."

"Oh what the hell."

I barged in. Lambert looked pretty dishevelled, long and wild blonde hair, in her fifties or thereabouts. The room was crammed with papers and books and obscure equipment. She stared at me with a mix of disdain and defeat.

"Hi," I said.

"How did you even find me?"

"Well you see there was a huge sign on the door that said-"

"I really must ask them to take that down, nothing but trouble."

"Look, I can't help notice you were a bit reluctant to talk with me."

"I'm very busy." She surveyed me from behind thick red spectacles.

"I've gotten quite good at pestering people recently," I said. "Down to a fine art. I'll keep pestering you until we talk properly. Nothing personal, you understand, but I'm in something of a bind."

Her eyes were tired but quick and they flashed across my face. She lowered her voice. "Are you alone?"



“Far as I know.”

She nodded to the door, got up. I followed. We walked silently down empty corridors, through an atrium, then out into the university grounds. Students were laying about on the grass, accruing debt and trying to fuck each other. Lambert glanced around. “I have exactly six and a half minutes until I need to leave for a seminar. Tell me what you want to know and I'll see what I can do.”

“Why were you asking my wife for a trouser press?”

“I like to keep my clothes neat,” she said. I glanced at her trousers. In fairness they did look quite nice. “And I wasn't asking your wife for a trouser press.”

“Then who?”

“That is something I won't be answering.”

“Why?”

“Because it will lead to a cut in my research funding. I'll gladly tell you anything in the public record, however, to save you the arduous task of ten seconds on Google.”

“All right.” Wind blew pamphlets about in the courtyard. We crossed it and turned into a narrow passage. “Can you tell me what you're working on?”

I caught the slightest hint of excitement on her face. “Computing,” she said.

“What kind?”

She shot me a sardonic glance. “Fast computing.”

“Is that why Polly contacted you?”

“I was a colleague of your wife's just after she arrived in England. We worked on a few mathematical challenges together, folding graphene, quantum algorithms, that sort of thing.”

“What kind of computing do you work on now?” I said, having learned that the same question can be asked multiple times with different answers.

“Topological.”

“Like, different shapes?”

“No.”

“Dr. Lambert-” I started angrily.

“Mr. Hare-”

“Dr. Hare, actually.”

We met eyes. “Oh? I do apologise.” What spineless twunts all these pointy-heads are, changing their tune the moment they hear you've stepped foot inside a university before. “Field?”

“Archaeology.”

“Speciality?”

“Thrace.”

She made a *mmhmm* noise and seemed to be thinking something over. We

came to a stream and paused on its bank. In the distance a housing estate was being built on what once must have been a gorgeous meadow. Lambert spoke again, slowly this time and with no discernible trace of contempt. "Dr. Hare, you must be no stranger to the idea of radical shifts in human history."

"I'd be a crap archaeologist if I was."

She took off her spectacles and rubbed her eyes. "I talk often with one of the university's own archaeologists, Dr. Phillips. There is a widely held sentiment at present that our era will be remembered for a sudden explosion in computing and communication. Let me assure you that this is misguided. Electricity is one transformative technology, to be sure. Another is on its way, quite apart from anything we've dealt with before. When it arrives it will shepherd in an age of such rapid change that I do not think there will be a single academic field unaffected by it."

"That's lovely to hear, but some specifics would be really appreciated."

"You won't be getting them."

We stood in silence a while and watched the stream and the tractors beyond it lugging dirt about, laying foundations, obliterating the field. "Was Polly involved in whatever this is?"

"Yes."

"Did it have something to do with her theories of logic?"

She looked startled a moment. I guess I wasn't supposed to know about that. Then: "Yes."

"Is she in danger right now?"

Very, very quietly: "Yes."

"If you tell me where she is, I swear I'll try my hardest not to get you in any trouble."

"I'm afraid that's information Polly wouldn't trust anyone with except Polly."

"You don't have any idea at all?"

She checked her watch. I didn't need to see my own to know she was already ludicrously late for her seminar. "Dr. Hare, as a final favour I will give you some advice. You can take it or leave it. I strongly suggest that you take it. Accept that your wife is gone and do not go looking for her. Even in the event that she is still alive, you will not like what you find. I can promise you that with absolute and total assurance."

"Are you married, Dr. Lambert?"

"I am."

"And if your husband went missing, wouldn't you go after him, regardless of all advice to the contrary?"

"I would."

“Then how can you expect me to do as you say?”

“I can't and I don't. But since I'm the one in the know here and you're not, I can only make suggestions based on what is the case.”

“None of which you're willing to tell me.”

“Correct.”

The stream gurgled. The tractors ambled. Lambert adjusted her perfectly ironed trousers and we walked in silence back to her office. “I really can't do this without you,” I said, trying for a pull on her heartstrings.

“Goodbye Dr. Hare.”

I read one of your papers a few days ago on quantum superposition; a particle existing in multiple states until it's collapsed by observation. Standing at the threshold of that office, I was overcome with the sense that several thousand possibilities existed in front of me now. I could scream and shout. I could make severe threats. Perhaps in one of these scenarios she would tell me more, or at least enough to locate you. It was unthinkable that there existed no combination of events in which something useful was not obtainable. And yet I left.

I made down the empty corridors again and across the courtyard and the students were still accruing debt and trying to fuck each other. God, what a strange time that all was, as an undergrad. All the confusion, the recklessness, thinking life would be like that forever, then being spat out the other side in the world suddenly, and the harsh light of reality dissolving all your plans to nothing. No, not nothing. Just a state less achievable and more problematic. But everyone still accruing debt and still trying to fuck. Some things are constant.

I turned the corner of the administration building and there, waiting by my car, was Jonathan Hayden, the 'civil servant' from your office, dressed in an immaculate grey suit, his blonde hair combed to within a micron. “Hi!” he beamed.

I approached and tried to stay casual. “Hello.”

“I was just passing through and couldn't help notice your car.”

“Is that so?”

“Some academic business at the university?”

“Student bars are much cheaper.” He was leaning against the driver's door. “I'll need to go now,” I said.

“Just had a few questions, old chap.” He smiled delightedly again as though we were old friends. His eyes bounced supersonically up and down me, scanning for what I'm not sure. “Not looking in the best shape, are we?”

I glanced at my reflection in the car window. I'd been cultivating a beard through laziness. My hair was large and greasy. My eyelids hung lower than they should. “Are you offering makeovers now, Mr. Hayden? I'll take a backrub if it's

going.”

He laughed good-naturedly and stopped all of a sudden and fixed me with eyes like some mad snake. “What are you doing at Evegreen University, Dr. Hare?”

“What are you doing leaning against my car several hundred miles from my house and, presumably, yours?”

He leant in close enough to appear menacing, but not so close that it implied violence. In a gentle voice he said, “Have you come to meet with one of your wife's old colleagues? If so, it would be remiss of you not to divulge this to me, considering the position I hold. As you know, any information relating to your wife's disappearance would be extremely welcomed by the British government.”

I remembered Lambert's comment about eras of history and the chats with her colleague. “I came to meet with Professor Phillips, an old friend of mine, not my wife's. Are you going to follow me on every errand? It's going to be extremely awkward next time I try to score some cocaine.”

He glanced down at his phone, typed. “Professor Phillips,” he said.

“Professor Phillips, yes.”

When he looked up again it was not with satisfaction. “I see there is indeed a Professor Phillips in the archaeology department.”

You were always better at this sort of thing: cold and calculated misdirection. I saw it again and again; white and grey lies you told to banktellers, to waiters, whatever needed to be said to ease the wheels of service and commerce. Once, after you told a restaurant it was your birthday just to get free dessert, you asked me why I never lied. Because decency is absolute, I said. You rolled your eyes and gave me a kiss. Fuck decency, you said.

Fuck decency, I thought.

“Blast, left some papers inside,” I said to Hayden. “You'll guard the car from robbers and arsonists if I go back in a moment, won't you?”

Hayden said nothing, only watched me pointedly.

I walked back into the Applied Physics department and strolled up to Lambert's office.

“What the-”

“So,” I said. “I'll ignore the fact that your seminar evidently doesn't exist. I assumed as much anyway. Now, I believe you gave me some advice earlier. I hope you'll permit me to return the favour. In the parking lot is a man who, now I can't be sure, but I'm fairly certain works for the British government in one capacity or another. He followed me here, and while I could certainly let him think it was for innocuous reasons, I'm also not above telling him the real one. I'm also not above mentioning the names of certain academics who work here

who may or may not have been previously associated with my wife.”

She took off her spectacles and appeared to be trying to decide between pleading and rage. She settled on something between the two. “You bastard...” she muttered.

“Now I generally don't like making demands, but this is something of a special situation. Unless you tell me everything you know, or at least enough to have made my visit meaningful, I will promptly go downstairs and inform the waiting gentleman of whatever he's inquisitive regarding.”

“You're lying,” Lambert said. I nodded to the window. She peered out at the carpark like a frightened pensioner. “Who's that?”

“I really don't know, but it's quite likely he orchestrated a break in of my house and has been stalking me for the last few weeks. Chances are he's well-connected at the very least. Well-connected enough, I'm sure, to detonate someone's research funding.”

Lambert did a bit more thinking, ran a fevered hand through her hair and barked, “Oh fine, you bastard. Fine.”

She fiddled with her computer a while, put a USB stick in, removed it, and handed the thing over. “If this gets into anyone else's hands-” she muttered.

“It won't. I promise.”

We held each other's gaze for what felt a few thousand years. “This is my life,” she said. “Everything I have. I lied, I don't have a husband, children neither.” She nodded to the papers on her desk. “This is my life. Take this away and you've taken my life, you understand?”

“I just want to find Polly.”

“I know.”

“Where is she?”

She nodded to the USB stick and kept her mouth shut. I went to leave. Almost out of the door I heard her say, “You're the rabbit, aren't you?”

“Sorry?”

Her eyes dimmed. “I...had certain affections for Polly years ago. She let me down gently, said there was a little rabbit to whom she'd already given herself and that was that. Hare, rabbit, it's not so distant, is it?”

I left on that and Hayden was still downstairs, waiting by the car. “Where are the papers?” he said.

“What?”

“The papers you went back inside for.”

“Everything's gone digital, don't you know. Kindly move aside.”

And with that, amazingly, he did.

We were out one morning walking down some Bulgarian country road, the middle of sodding nowhere; your mum's village. There was a Thracian excavation going on just a few miles away and I said something in passing about how neat it was that the Thracians themselves might've walked these same roads thousands of years ago.

"Yes," you said with a tired voice, "but what built the roads?"

"Err – people?"

"And the land?"

"Oh I see. Here we go again."

Fundamentals, fundamentals, fundamentals. It was never amazing to you that humanity was so old, was never impressive that we lived at the top of time's pyramid; hundreds of thousands of descendants beneath us; hundreds of thousands of years of just eating, sleeping, screwing, of trying to stay alive; never remarkable that the ground we walked on at that very moment was probably rich in their detritus, a time machine right beneath our feet. Because all *that*, you reminded me again and again, was built on nature, and She was the real prize. That smugness poked its head out every now and then, especially after a few drinks. I could've held ten PhDs in archaeology and it still wouldn't have been a real field by your estimation. Because it was arbitrary and stupid.

I got furious out of nowhere. The sun was unbearable and the road was unending and I said, "You're like a stupid little hummingbird, just darting about, trying to feed on any nectar it can find and ignoring everything else."

"Uh huh," you said.

"Fuck anything even a little miscellaneous, right? It's all just pseudo-science."

We'd never really done the yelling thing before. You went quiet a while. We turned onto a path leading up a hill. Twenty minutes was long enough for me to start feeling guilty, but I was too prideful back then to apologise. You sat down in the wheat or whatever it was and patted the spot beside. I joined and we both laid down.

We looked out through a tunnel of crops; the sky sitting infinitely in the distance.

"I like hummingbirds," you said. You were grinning a little. "They have to keep eating or they die. Silly little things..."

"Well biology's just another dumb footnote to physics, right?"

You blinked to signify a lazy yes, something only Bulgarians seem to do. Then you said, "I don't think archaeology is silly though."

"What then? Pointless?"

"No."

God damn, I almost screamed – I just want you to take my work seriously. I want you to ask about mine like I do yours all the fucking time. I want to feel purposeful, I want to feel like a man, I want to feel respected, but I can't for as long as the woman I love looks down on my field like it's a dumb waste of time.

The crops swayed. The sun stroked us with little marmalade fingers.

“Yes all right, I'll be a hummingbird then,” you said. “I'll fly about up high drinking nectar with my big long beak, examining the tall things and the abstractions to find out where everything came from.” You kissed my nose. “And you can be a rabbit, Benjamin Rabbit, bounding about down in the grass, looking for your silly pots and skeletons to find out where everything's going.” You began to unbutton your dress. “Better than that, you can be my rabbit, Benjamin Rabbit.”

Funny how memory works. I can't recall the next day. Or the next. But I remember snapshots, the fragments that apparently mattered: finding you crying on the sofa when your grandmother died, getting bored during a movie and pretending to have a fight in the cinema, the morning you had vodka for breakfast, and the evening when you told me everything, or as close to everything that makes no difference, about your childhood. Your first kiss was with a Romanian boy in the field behind your parents' house. Your hamster was called Brody, after Adrien Brody – who you fancied back then, I suppose – and one day he was shivering. You picked him up and knew it was time for him to die, and he did die, there in your hand. When his little black eyes were closed, you wrapped him up like a Christmas present with a bow and everything and plopped him in the village river and watched him sail off.

Then you grew up and life happened. Lots of it. Somehow I weeded my way into those bits like a stowaway.

I cannot bring myself to believe that it was all for nothing, even if everything is for nothing anyway. I cannot bring myself to believe that screwing in that field, or our marriage, or all those quiet Sunday afternoons together were just a phase matter went through, and then wandered off to be a rock or a shoe instead.

You took fourteen billion years to make, and you won't happen again. Your ghost is everywhere now.

I haven't checked the USB stick. It's three in the morning and I know whatever I find will just lead me on to the next development in what is becoming a horrible fucking saga. So I'll sleep now, I think.

Love from me and the cat. She sends her best.

B x

## 14.

Argie explained her unusual tier privileges and insisted on busting Lambert out of her incarceration.

“Young lady...” The Navigator murmured.

“It’s fine,” Argie said.

And it had been easy. Argie simply requested that Lambert went free and Lambert went free. The scientist examined her hands as if in disbelief, stared at Argie, stared back at her hands. Then quietly: “Thank you.”

“It wasn’t a gift,” Argie said. “You’re going to show us around Lemuria.”

Lambert raised an eyebrow. “Is that so?”

“Yes. Your privileges can be revoked at any time.”

A pause. “And if I help you, you’ll let me keep my freedom?”

The Navigator turned on Argie. “If the Lemurians hear of this, they won’t take it lightly...”

Lambert murmured, “I don’t think they’ll give too much of a damn.” Before them appeared a wasteland, abandoned houses, abandoned complexes, some falling apart, others almost burned to the ground.

“Lemuria,” Lambert said. “Or, a version of it you would understand. No one here is barbaric enough to live in sapien structures, but I think you get the idea.”

“What’s happened to the population?” Argie said.

“Fled,” Lambert said and nodded to beyond the houses. There was the black pulsing lung again, approaching slowly, but approaching nonetheless. “They’re calling it the Mergerment. It’s already eaten a few million Lemurians. The rest made for the outskirts of the tier.”

“You can’t stop it?”

“As I told you before, no. Nothing affects it. So you see there is very little to show you, even as an accomplished guide like myself.”

“Take us inside Lemuria.”

“Your mind is too small to understand it.”

“I’ll set up a perceptual converter, make it possible for an *idiot like me* to grasp.” Argie did so. There was no sense of the world shifting. Arcadia was gentle in this way.

“Suit yourself,” Lambert shrugged. She vanished, leaving transport coordinates behind.

The two of them alone now, The Navigator said quietly, “She can’t be



trusted.”

“We don’t need to trust her.”

“Argie...”

“The tier is in turmoil. So what if she tries something stupid? I’ll just trap her back here as the Lemurian reception lady.”

The Navigator thought this over a moment, went to say something, then thrust his hand suddenly into Argie’s head.

Images exploded in her mind, whirling colours, a dream against her will. The picture focused suddenly. Lambert appeared, much younger – according to her tags. She stood on a great observation platform. Below were hundreds, no, thousands of figures, some chained, others bound in rope. They were screaming incoherently, and others not so incoherently: *Let us out, please, God, let us out.* Lambert smiled delightedly to herself. With a wave of her hand more figures appeared below, bound in new fashions, seared over fire, trapped in ice. Argie looked closer. Some of the figures resembled Lambert, she realised. No, *all* of the figures resembled Lambert. *Dear God*, one screamed. *Please, stop.* The wailing increased in intensity, a choir of agony, the scene a mess of blood and flayed body parts, of severed limbs.

The Navigator pulled his hand back. The world normalised. “You see?” he said. “That’s who we’re dealing with. She cloned herself just to torment them, excusing it with some bizarre scientific justification.”

“Don’t ever do that again,” Argie spat.

“You do not ask a tiger to lead you into the forest, understand? What if she takes a copy of our selfsenses and does the same thing to us?”

“It wouldn’t be us...” Argie murmured.

“*Idiot*, of course it would be. By that logic you’re not the same person as two cycles ago if you’ve changed in any sense at all. It’s a stupid way of thinking. She’ll torture us forever given half a chance. They stopped her once. You’ve just let her back out.”

“She’s powerful. If it comes to it, she’ll fight for us. She values her freedom too much.”

“You’re a child. No, dumber.”

Argie put up a hand and growled, “We’re here for my daughter. That’s all that matters. We’ll take whatever risks we need to. Got it?”

The Navigator scoffed and followed Lambert’s coordinates, vanishing. Argie did the same.

They found themselves on the Lemurian plane. The air stank of a recent fire. The ground was scorched in places. Lambert stood off in the distance kicking at rubble.

“How close is this to the real Lemuria?” Argie shouted to her.

“As close as your tiny mind is getting,” came the reply.

Lambert ascended into the air and began to fly over the plane. Argie and The Navigator followed. They passed over abandoned villages and cities. Statues stood at their centres, hypershapes, some in four dimensions, some in five.

“Welcome to the bustling heart of Arcadia,” Lambert chuckled. “Where everything has gone to hell.”

A scream sounded in the distance, a bass warble that seemed to echo through the valleys. “What's that?” Argie said.

“Residual selfsense,” Lambert said. “Pain itself, absorbed into the ground.”

“My god, what happened here?”

“Panic. The Mergerment is coming. You wanted to see Lemuria, no?”

Argie and The Navigator exchanged a glance but said nothing. They passed over an ocean of multicoloured tiles, over deserts and swamplands. In the distance, finally, they came to an enormous swirling hypershape. Lambert approached without caution and they followed. “You know,” Lambert said whimsically, almost singing, “I found a selfsense surgeon some time ago willing to restore my sapien memories. He did a fine job. I recall life back then, some of it. *Nasty, brutish, and short* as the adage goes. But if the sapiens could have seen this...”

“What is it?” Argie called.

Lambert didn't answer, only flew them closer. Figures were discernible below and judging by their tags they were denizens, not mere noncons. Argie, The Navigator, and Lambert descended. An alarm rang out the moment they touched ground, screeching like a bird. The figures turned and approached, bounding across the land at an absurd speed. A man arrived first, followed behind by several unsexed denizens and an entity presenting as a hypercube. “What is she doing out of her enclosure?” the man barked, staring at Lambert.

“I wanted some air,” Lambert said.

“Bind her,” the man said. His entourage approached.

“Wait,” Argie said. “I let her out. It was my doing.”

The man regarded her coldly. “Why?”

“She's clever. She could be useful. The tier is falling apart, isn't it? You'll need clever folk now.”

The man stared a moment, looked back to his entourage, then burst out laughing. The rest of the group joined in. Then presumably having checked Argie's tags he said, “Spoken like a true ape-fucker. Do you know where you *are*, little girl?” He pointed to the huge whirling artifact behind them. “That is one of the pillars of the Lemurian project, the Temporal. You've heard of the

pillars at least, I assume.”

Argie shook her head, embarrassed.

The man burst out laughing again. “It’s like this,” he said.

“No,” The Navigator said protectively. “I’ll show her.” He put his hand to Argie’s head, but hesitated. “I’ll be gentle, all right?”

Argie nodded cautiously. Her mind whirled. This time it was not a moving scene but notions, thousands of them, all separate at first, then cohering into a sensible whole. All at once she understood.

Lemuria was attempting to peer into the bedrock of matter, to define what governed the cosmos’ physical laws. That had always been the Lemurian mission, from the moment the first infants migrated up into the tier and the Glass King had separated it from the Ape Cellar. Early on it was decided that to answer the question of what matter *is*, the project would have to be split into four sections. Temporal: Why does the universe exist in time? Spatial: What was the origin of space and matter? Scalar: Why does the universe behave differently depending on the scale at which one conducts an experiment? And Interactive: What is it about the first three interacting with each other that leads to a consistent universe?

To Argie’s perception at least, the pillars had taken the form of actual artifacts, though in reality they were probably closer to monstrously large nodebanks. Several million Lemurians had been working for era after era at each of the pillar sites, running calculations, comparing data, testing hypotheses. After one hundred thousand cycles (several thousand years in sapien time), the project was not even half-finished.

Temporal had made excellent progress peering into the roots of entropy. A number of problems had been solved such as why the universe created ordered states. In fact the initial cosmic singularity, the big bang, could only bring low-order matter into being; given enough time, complex structures were bound to emerge. *Why* that was the case though was still not clear.

Spatial had also forged ahead, explaining matter as a form of high-level logic. Matter itself appeared to be a necessity in nature rather than just a mere accident; born of node logic. Again though, it was unclear why this should be the case.

Scalar had been the first to produce actual results that didn’t require further explanation. Matter behaved bizarrely on a quantum level since it was too small to be governed by the majority of natural laws that operated the macrocosmos. This was matter’s most honest state in any case; superposition, quantum tunnelling, entanglement, cleavage, wormhole fracture; all of the strange furniture of quantum mechanics appeared to be the universe’s true face. All else was matter trying to seem sober, putting on laws for show.

The Interactive pillar had enjoyed limited achievement. With so much work yet to be completed at the other sites, it was almost impossible to explain cosmic interaction without the necessary data. The Lemurians had made some progress though. A theory of quantum gravity had long ago been developed, gravity itself originating from spacetime geometry rather than any kind of particle proving itself responsible for the effect. String matrices now accounted for almost all manifestations of subatomic particles, save for the up-phidon and blue aethic.

The dream, of course, was to one day pool the findings into a single overarching proof or equation not just to explain the behaviour of all physical processes, but the presence of spacetime itself.

"I'll ask once more," the man said. "What is the monster doing out of her cage?"

"Getting some air," Lambert said again.

The man advanced.

"Wait," Argie yelled. "Just wait. I'm looking for my daughter, Kaluza."

"How lovely for you."

"Here, this is her," Argie said and sent a selfsense packet in the Lemurian's direction.

The man shook his head. "Don't recognise her, sorry." He advanced towards Lambert again.

Lambert began to back away, looking a little helplessly to Argie.

"I do," came a voice. "I recognise her." It was the hypercube, glowing a gentle green now. "She came through here a few hundred cycles ago. She wanted to know about our work."

"You're sure?" Argie said.

"I'm sure. She was insatiable, wanted to know everything about the project. I told her all I could. She didn't seem like an ape-fucker."

That's because she wasn't one at all really, Argie thought sadly. "Where did she go next? Did she say?"

"To the other projects. Scalar first, I think." The cube shrank a moment, apparently embarrassed. "There's something else," it said. "She wasn't right. She wanted to talk by selfsense all the time even though she didn't really know what she was doing."

"Sounds like Kaluza all right. Thank you." She turned to The Navigator. "We should visit the other towers. Maybe she decided to settle with one of them."

"I'd make haste with that," the man said. "The towers are all being collapsed for preservation." He nodded to the Mergerment in the distance with its great expanding black bulk. "Can't have that thing swallowing them all up."

"Hey!" Lambert yelled. One of the entourage was trying to bind her hands.

“Please leave her alone,” Argie said. “Really, we have use for her. I'll make sure she doesn't get up to any mischief.”

“And who the fuck are you?” scoffed the man. “Do you even know who this is? Do you even know what she's capable of?”

“I'm aware of her crimes, yes. If she takes a step out of line I'll banish her to the greeting room again.”

“And how are you going to go about that?”

“I have special privileges.”

He raised an entertained eyebrow. “What special privileges do they give to ape-fuckers these days? First dibs on breakfast?”

Argie was going to reply but she sensed the man was studying her, probably running a deep scan on her tags. Suddenly he took a step back and his face faded to neutral. “Apologies,” he murmured. “I meant no disrespect. Scalar, Spatial, and Interactive are still all operational for a short time. You should be able to find them with ease. We suggest you get going quickly. The towers won't stand for much longer, and the logicians will probably move on, including whoever you're looking for.”

Argie stared. On instinct she shut down the perceptual filter to see Lemuria as it was. The planes dissolved. The figures dissolved. In their place remained only tags and notions, little more than a mad cacophony of information. She resisted the urge to scream, to turn and run, if she still had the presence of mind to operate her legs. And she saw, just for a moment, that the man – or what had appeared a man only a moment before - respected her suddenly, in some dark and knowing way. No, it was deeper still. He was afraid.

She turned her attention to the tower. It was gone also, replaced with its true form, a half-finished proof perhaps two inches long, surrounded by an infinite sea of data and mathematics and nodes. A diamond amid straw. She reached in with her selfsense.

“Hello,” the tower said.

“You're sentient?” Argie replied directly with her selfsense.

“To one degree or another. Do you have a query?”

The thing grew and shrank in four dimensions, warped and twisted. “Is there a simple truth to you?” she said after some thought.

“Yes,” the tower said.

“What is it?”

“Time is the medium by which matter will organise itself into a perfect state. More than that I cannot say until I have been completed.”

“Completed?”

“There is still much work to do. For now though please think of time as the

ocean the boats of matter sail on.”

“Ah,” Argie said. “Thanks.”

“Don't mention it.”

She squinted at the mathematics surrounding the proof. Some of it she recognised: string topologies, hyperplane intersections, field equations. There was ape physics in there too; Lorentz contractions and special relativity.

She reactivated the perceptual filter. The world returned to a recognisable state.

“Who do you think I am?” she said to the Lemurian man.

“Don't trust the witch,” he said, nodding at Lambert. “She'd do anything to prove her theories. Whatever you do, don't trust her.”

The entourage vanished without warning, leaving no transportation tags behind. The tower was gone now too; just Lambert, The Navigator, and Argie.

“You saw the tower properly, didn't you?” The Navigator said. Argie nodded. “Did you understand?”

“No.”

“Good, I'd be worried if you did.”

A great shrieking rang out, a moaning – the yell of thousands being tortured simultaneously. It seemed to come from the direction of the expanding black lung on the horizon.

“Where will they go?” Argie said. “Where will they take the towers?”

The Navigator shrugged. “Nowhere is safe from the Mergerment.”

The thought was stupid but she couldn't help voice it: “What if we left Arcadia?”

“No.”

“I've heard it's possible. What if-”

“Of course it's possible,” Lambert sniffed. “That's not what he meant. Sure, we could all download into mechanical bodies of some kind, flee to whatever's on the outside. Well, so will the Mergerment, and begin converting the matter of the sapien planet anyway.”

Argie could not hold the thought properly in her head. “How is that possible?”

Neither Lambert nor The Navigator answered. Instead they casually climbed into the air and waited for Argie to join. Then they raced off into the horizon, the three of them, passing over yet more deserted cities and towns, the former glories of Lemuria.

They found the second tower easily enough: Spatial. It presented as a four-dimensional shape Argie knew no name for, painted a colour she could not quite conceptualise either. A few Lemurians were busy collapsing the structure. They

didn't react to the newcomers.

Again Argie deactivated the perception filter and asked the tower, "What are you?"

"Hi," the tower said. "That's quite a big question."

"Boil it down a little then, if you can."

There was a pause, then the tower said: "Many holes exist in my structure. I am still far from complete. However, know this: I am concerned with what space is. All material phenomena is a warping of space in a sense. Attraction between objects is merely four-dimensional curvature."

"Oh, *merely* huh?" Argie said.

The tower ignored this. "You visited the Temporal tower, yes?"

"I did."

"Then perhaps you have some idea of how inextricably the two of us are linked. Space without time is uneventful. Time without space is a beginningless no-thing."

The tower was silent again. "Is that the whole of it?" Argie said.

"It is as much as you will be able to understand. So in effect, yes, that is the whole of it."

"Have you seen my daughter?"

"I have seen everything."

"Her name was Kaluza. I think she came through here. You must have spoken to her."

"I have seen everything," the tower said again and Argie moved on.

15.

2/1/2022

P,

I thought about ordering a hooker. I've never ordered a hooker before.

I didn't order a hooker, if you're wondering. I do miss company though. And other stuff.

I miss napping on the sofa in the afternoon with you. I miss watching you getting ready. I miss opening post together. Hookers don't generally provide those services, I'm quite sure. Even if they did it wouldn't be the same.

What does Clare next door do all day with her husband dead, I wonder? Watch TV and clean and go for intermittent walks and just try to pretend time isn't passing, and drag herself further and further from the facts of reality. The dead do not improve.

I went through Lambert's data stick. Nothing terribly understandable in there to a pleb like me but I got the gist. It was mostly email correspondences between you and Lambert, as well as schematics for some kind of....*object*, a few unpublished papers, lots and lots and lots of maths, details of manufacturers, and a huge list of what looked to be passport information of about 20 people with no obvious connection.

The oldest document appears to be an addendum to the paper of yours Dimitar gave me, but as far as I can tell it was never published, or finished for that matter. The part that caught my eye was this:

*Doubtless there will be accusations of too much abstraction in the work presented here. However, we should like to propose a decisive method of proving what we have coined 'hard logicality'. If nature is indeed deeply axiomatic – or 'logical' – there will be clear links between apparently arbitrary phenomena such as the formation of planets and the structure of the atom, and incontestable mathematical absolutes. One will be an expression of the other, however removed the two may seem. As touched on above, the quickest way of either revealing these linkages or disproving their existence is via an algorithmic approach.*



Which I took to mean, “Let's compute how reality works”. Anything else, darling? Why not crack the meaning of life while you're at it?

*The main hurdle appears to be in designing a general-purpose algorithm to seek out abstractions. AI is currently terrible at this. It should be no problem for a sophisticated algorithm to grasp Newton's equations and the Fourier transform. The issue will be in asking it to then find comparisons between those absolutes and high-level arbitrary empirical measurements, such as the shape and distribution of galaxies.*

*If this can be accomplished (and we shall shortly examine how it might) then we predict one of two outcomes:*

*I. The system will, after an indeterminate period of time, locate substantial proof for hard logicity by demonstrating a priori linkages between axiomatic assertions and real-world phenomena. This would potentially pave the way for a new mode of investigation, both astronomical and quantum. Rather than simply relying on data collected from experimentation to build theories with, predictions could instead be made from axiomatic logic alone. The most interesting ramification of course is that nature would have a defined structure which is dictated solely by axiomatic logic itself. The configuration of the universe could not be imagined in any other fashion, thereby calling multiverse theory into question, as well as comic variability.*

*II. The system will find no substantial proof for hard logicity, thereby suggesting that nature is not deeply axiomatic. This will be a disappointing but nonetheless insightful outcome. It will also cast doubt somewhat on a so-called 'theory of everything' ever being attainable at all, since our universe may be just one configuration amid potentially trillions. Much like an ant finding itself on a hill, there is no reason why the hill should be that size or that height, the ant merely climbed that one and not some other.*

*It will come as no great surprise however that the authors of this paper are somewhat in favour of the principle of hard logicity, and would not have untaken this project otherwise. As we shall see there exists a growing body of evidence to support the presence of axiomatic logic clearly embedded in nature. We shall now examine the details of the algorithm in question, and the specifications of the device that would be required to execute it.*

This was followed by a bucketload of diagrams and bizarre equations. For

what you called “successful verification of hard logicality” the computer itself would require an ungodly amount of RAM and at least four hundred and thirty years to complete the 'experiment', give or take a few Christmases.

Lambert's research sprawled over about twenty pages, jargon I wasn't sure was even English, let alone understandable. “Hypersymmetry”, “deterministic corporeality”, “multidimensional meta-iteration” and so on. Lambert was apparently obsessed with four-dimensional geometry, believing it possessed the capability to compute far in excess of modern machines. How one would go about building such a device was left suspiciously absent.

Well, that clears that one up at least. Your theory and Lambert's miracle computer. A match made in heaven. How far you two actually got with it is anyone's guess.

Anyway.

Emma brought over a bag of weed a few days ago. I said I wasn't really interested but she left it here anyway. By midnight I was kind of interested so I bought some skins and tobacco from the all-night petrol station and rolled a passable joint, smoked it on the roof. Didn't feel much so I rolled another, no tobacco this time, and smoked that too. Lordy, what a decision. The first one hit me proper then. The second was close on its tail.

I took a few breaths and tried to hold on to reality but already knew I'd made a substantial mistake, and would come to understand this to greater and greater degrees as the evening progressed. I laid down and closed my eyes. Every time I thought, “Well, at least this can't get worse,” it got worse. I attempted to invoke a Buddha-like serenity and accept that I was fucked.

Then the interesting thoughts started popping out of nowhere, just like your beloved virtual particles. One I was particularly fond of, so I decided to befriend it. It went like this:

Isn't punctuation fun? How dull would a sentence be without punctuation? Just think about it a sentence with no full stops or commas or hyphens would have to continue and continue and any contradictory point you wanted to make or qualifier or something would just have to get shoehorned in there because you could not pause or stop and soon it would be ever so tedious to read like this one.

And isn't life a bit like that? the thought said.

What? I said.

Just consider it, the thought said.

The merit hit me almost at once:

I've never missed you like this. Sometimes when you've been away at conferences, or whatever, I've wanted you home. I've spent whole days missing

you, even done a bit of longing, but it's never physically hurt. This is different. A limb is gone. Every day the list of things I would give away just to have you back grows exponentially. A piece of punctuation has been placed after your name, has been placed here in time, and I don't know if it's a full stop or a semicolon. I'm like some dumb busted up dog wandering around with no direction or purpose. But I would never have missed you so much without this happening. That's a funny thing. The sentence would've just carried on and on, never developing because it has no contours or opposition. Throw in a *but* though...

**“But** your wife is missing.”

**“But** she might not be coming back.”

**“But** you are incapable of being without her.”

Are we done? I said to the thought.

Not yet, the thought said. It's not just your relationship with your wife that benefits from punctuation. What about life? Imagine if the days of your life were all fantastic. Imagine if there wasn't a single drop of boredom or despair, every ice cream delicious, every fuck explosive. They call that paradise. In fact the word is *hell*. The world would cease to mean anything. It would all be fantastic, and as a result none of it would be fantastic.

Imagine, likewise, that death was abolished. Would there be anything left to fear? Would there be anything left to enjoy? Eating is dull without first being preceded by hunger. All spontaneity and risk would be empty without the constant looming cloud of death in the future-distance. Be glad Polly is gone for now. You'd never have loved her quite like this otherwise.

Yeah, I thought. That's true. I never have loved you like this before, except maybe for those days when we lived in different countries, but we hardly knew each other then.

The weed kicked me again. Another notion turned up at the party:

Is it possible to love someone for being less than the myth you expected?

There are the early days aren't there, of courting and screwing, of kissing goodbye for ages and growing obsessed. You studiously watch this other human for hints of their deep-psychology. If they're nice to the waiter, maybe that means they're a nice person etc. But if you stick it out with someone long enough, if you make it through all that, if you live with them, if you watch them go through a bereavement or some horrible disease, then they'll give you a peek or two at their true face. If the conditions are right then it is possible to love that face, but quite improbable you will like it. You've killed the myth. You've come up close to a harsh truth: people are ugly, all of them. They're bitter and mad and insatiable. Whether they tell you so or not, there will have been days when they

regretted meeting you or getting close, just as you will have those days regarding them. They will consider choosing their own self-interest above yours. They will fantasise about other men or women. They will be joyless for weeks. They will squeeze the toothpaste from the middle of the tube.

But if you can watch the myth die before your eyes, if you can accept that your lover is disgusting and petty at times, if you can accept this of everyone you ever meet, then everything will almost certainly be fine.

I saw your myth die and I met the monster inside on occasion. She was even prettier than the myth.

A few hours passed and I sobered up. I felt all right. I got off the roof and laid on the kitchen floor and the cat curled up on my chest. She is easily pleased and her loyalties are questionable at best. She misses you though. She told me.

I'm bored of this emotional bollocks. Shall we talk about the Great British Polly Hunt instead?

Interesting development last week. Lambert wasn't lying. She really is working on something to do with computers and geometry, or *topology* as she put it. I read one of her early papers. Back then she seemed to think the future of computing was in what she called *high-dimensionality*. As far as I can tell that has something to do with wibbly geometry.

Actually, I can see why you two got on. Her whipping boy for years was a thing called 'Moore's Law', which as you may recall I once did a bit of research on to impress you. It's a sort of rule of thumb for computers getting exponentially better every year or so. This only works as far as silicon goes, some smart types are arguing. And when silicon runs out, what then? Topology computing, Lambert thinks. Whatever that means.

This isn't of much interest to me. Sorry. I'd rather just know why *you* were interested in it. What a Bulgarian mathematician's theory of everything and a physicist's pet computer project have to do with each other is somewhat lost on me at the moment, or rather I can't see why you were taking such a keen interest. From what I can tell, Lambert's ideas are almost universally shunned by people who know what they're talking about, and your crackpot theory is so abstract it will never have anything to do with the real world anyway. Sorry again.

And then I remembered Tamala Road.

Let me just take a run-up for this one. In the unlikely event that you ever do read this, you're not going to be terribly impressed.

Here goes then.

A few years ago you were acting a bit distant. This wasn't unusual for you, but it sent me a little nutty. You started coming home later than normal. I think I vaguely poked at it and you said something about having loads on at the

university. That sounded like bullshit. One night around six I phoned a secretary at another faculty and asked her to see if she could find you as it was urgent. She said you'd left around four, same as most afternoons.

Shame and dread. Dread and shame.

What's a husband to do?

I drove up to the uni the next day, waited for you to leave, then tailed you. You drove out onto the motorway, past Wilthail, past Croftbury, and turned into a tiny hamlet I didn't catch the name of. I lost you a few times, but a bit of aimlessly driving about and there was your Peugeot sitting on the drive of some massive manor house. I parked at the end of the road, distant enough I hoped, and just watched. Nothing stirred inside for a while. Then I noticed something in the garden. I drove around the house to a dirt track behind and peered in through the bushes. Very, very vaguely I could make out your slim frame on a chair, nodding and looking at the ground. A figure sat opposite and did most of the talking – I couldn't see their face. You two didn't touch or anything, just sat and talked for hours until the sun started to set. You stood up to go and I drove off and didn't ask you about it when you got home.

As far as I can tell, the only secrets you ever kept were the ones that needed keeping. That is sort of a comfort.

Like when you ate the last of the toast because there wasn't enough for the two of us, and called it “secret breakfast”.

Like when we chose wedding rings and then you went off and had another one made for me instead, inscribed with the equations of the Lagrangian of the Standard Model.

Like when you had that abortion.

I was sorting papers in our bedroom and found a sheet of medical jargon, if you remember. Not all of it was jargon though, and I guess I caught a few keywords like “scheduled” and “termination”. So I went and found you in your study and asked about it.

“Want to tell me what the fuck this is?” I said.

“I would prefer not to.”

I left the room. I stood in the hall for a bit. I walked back in. I think we were shouting for around two hours.

It started as a little spring at first; we kept to the main issue of how in God's name could you do in our unborn child and not to think to mention it to me. And I guess that got me ranting about how you never tell me anything anyway and you think you're so fucking aloof and clever. You are fucking aloof and clever of course, but still. Well I'll tell you a thing, now you might never hear it. I wasn't really angry you had the procedure done without telling me. I wasn't even angry

you'd done it in the first place. I was angry because I think we could've had a nice kid together. Your smarts and beauty and goodness, and my inability to handle finances or the most basic of life matters; the little thing would've been set for life.

In all seriousness I just imagined you as a mother sometimes, usually during gross and quiet moments. When you came in from planting the roses and you were covered in dirt and you didn't even wash your hands, just started making lunch. When you pushed a strand of hair behind your ear once on the bus and you looked more beautiful than I could ever possibly hope to put into words. When we went to meet my baby niece for the first time and she opened her eyes and smiled up at you and you smiled back and caught yourself and stopped smiling.

Well that's all beside the point now I suppose.

"I don't want a little parasite," you said, and you started to cry and got your coat and drove off to stay at Emma's place for a few days. Then you came back and we didn't talk about it again. So, yes.

We both know that isn't the full story though. As the custodian of the Museum of Your Life, I feel it might be my duty to preserve the next exhibition in writing. You probably don't know I'm even aware of it. But I know lots of things now. I wasn't sure whether to write this one out, but it seems important; Dimitar trusted me with it.

Your parents came from a small village in the middle of Bulgaria, only a few hundred people. Your mother didn't really display any talents, but your father had an aptitude for painting as a boy. His father before him had been a fairly well-renowned artist too. Your father was loved in the village and he spent most of his teen years pissing about in the mountain and painting landscapes. A few villages nearby noticed how good he was and he made an okay living selling his stuff.

A little girl from the same village called Tanya Kadysheva was late home from school one day. That wasn't so unusual, sometimes she went to a friend's house. By nine o'clock her parents were getting worried and the alarm was raised. The village was combed by the locals, then the fields around it. She had vanished.

Three days of searching later her body was found on the bank of a small river. From the marks on her wrists and legs she had clearly been tied up. The cause of death was strangulation. The village was in shock. No credible perpetrator was found after a fairly lengthy investigation, nor was a motive discerned. In the end the whole affair was blamed on passing vagrants, leaving Tanya Kadysheva's parents no hope for retribution. They presumably lived with

the thing, or tried to live with the thing, grew old, and died.

Your mother and father married young and your father was offered a position studying at a good university in Sofia. After the incident with the little girl they were glad to get out of the village; the population never really recovered. Your father graduated after several years of hard work and got a decent job in the communist government working with the deputy secretary of the party, which was a pretty big deal at the time.

He became a household name in months and was well-loved by many Bulgarians and considered a softening influence on the deputy secretary himself. The couple bought a house in the expensive part of town and you were born at 5 pounds and 8 ounces with brown eyes and a little hair. Life was good. Your mother grew used to the parties and money and occasional bit of western contraband that found its way into their home. They hosted their own parties and high-ranking members of the Bulgarian Communist Party attended. Journalists followed their exploits with benevolent interest and the two of them were often to be found beaming from the second or third pages of newspapers.

Sometime during his third year in the post your father floated the idea of stepping down, quite out of nowhere. When asked why, he responded he wanted to get back into painting. He enjoyed life in politics, but hated all the pretension and pomposity. He didn't want a more prestigious position. He wanted to paint. Still, your father remained in his position until opting for a slightly less impressive post as a high-ranking bureaucrat. The money was still good and your mother appeared happy with this.

Communism fell and your father moved into chemical engineering. Ever talented, he worked his way up the corporate chain and sat on the board of directors.

One evening, back with your parents for Christmas, you overheard a conversation between your mother and father from their bedroom.

Once again he floated the idea of stepping down to pursue his art.

Old age was looming. He wanted a quiet life, no doubt.

Your mother kept her voice low and calm and dismissed the thought. Your father persisted. Your mother informed him that if he continued to cling to such stupid notions she wouldn't hesitate to link Tanya Kadysheva's death to him. She mocked crying for a little while to demonstrate the point: *Oh it was horrible, he said he'd kill me if I told.* You heard all this too, of course.

Your father was quiet after that and then the bedroom light went off and your father stayed at the company another five years.

He hanged himself in a wardrobe on May 3<sup>rd</sup>, 2008. He left no note behind, nor gave any warning that he intended to end his life preceding the event. Tanya

Kadysheva's name was probably never brought up again until now.

It's funny, I noticed that you treated your mother forever with kid gloves, but would never have imagined this might be why. How long was the old man being ridden by that sociopathic trout? His entire life, presumably.

His last painting was a self-portrait, the only one he ever made. You showed it to me on your phone once. His eyes are deep and dark and hollow. His lips are cracked. He appears an old used up sponge, sucked dry and made to work even after that.

You distrust women, you always have. You distrust mothers especially. You would've been a good one though, whatever you think, whatever you were afraid of, whatever kernel of horror your mum planted in you with her years of acid and lies.

Anyway, that's why I was angry when I found the medical documents. I'm not so angry now I know why you did what you did. I'm still a bit angry though. Angry at your mother, angry at small minds who ride big ones and milk them for talents they themselves couldn't fathom, let alone imitate. Angry at whatever line of code your mother inserted into your program: IF CHILD THEN ABORT. IF LOVE THEN RETREAT. DO NOT BECOME LIKE HER.

One night, decades ago, some twisted fuck murdered a young girl for no more than the perverse kick of doing so. Neither Tanya Kadysheva nor her killer could have imagined that the event would, in its own strange way, also take the life of your father forty years later, and the potential life of our child some years after that. What a strange web.

I have known both men and women like your mother; people with nothing left but the desire to take what little you have remaining. They are spite engines.

All decisions must be like that, a little ripple at first, then flattening out into infinity. Electrons rubbing on electrons in the brain, pushing monkeys about to wreak damnable savagery.

I wonder if your mother knew what she was doing to your father?

I wonder if you knew what you were doing when you left?

If you chose to go missing darling, if you knew what you were doing and still did it, I only hope you were being so single-minded that you shut the consequences out of your head. The idea of you knowing what this would do to me and still doing it anyway is a feeling I can't find a word for or a limit to.

All that Hollywood rubbish, all the saccharine bullshit about self-sacrifice, about losing yourself in someone else, about your life taking on some new meaning, I was convinced it was all bollocks for years. Well I found it in you; in your smell, in your breath, in the way you slept during the tiny hours, in the way you put on your coat and drank your tea and picked your nose when you thought



no one was looking, in the way your sweat smelled when you'd been to the gym, in the way you seemed to see through maths without even bothering to look at it, in the way you were so effortlessly yourself. I just loved you so truly.

Tomorrow I'll drive out to the house I followed you to that time on Tamala Road. I'll bet my balls whoever you were meeting there had something to do with your little world-solving project.

The cat sends her love. I do also.

B x

## 16.

They flew for hours in silence. Lambert had offered to materialise them wherever they wanted to go, but Argie declined. Traditional travel felt like a better way to get a feel for Lemuria, even if this was only a simplified representation.

She thought idly of Benjamin Hare and his letters, of his Logic Beach, of all the gorgeous artifacts of mathematics and geometry that would litter the sand. The principles of reality laid out in the wake of the path of the encroaching tide. Plus, he was the lover of Polly Hare no less. That in itself was enough to grant Benjamin Hare a godlike position in Arcadian history.

Finally they spotted the tip of an enormous mountain in the distance, and what appeared to be a portal stretching up into the sky, much like the one through which Argie and The Navigator had travelled through from the Ape Cellar. They approached. A gigantic crowd had formed at the base of the mountain, arrayed in a line. Close now, they could make out some kind of wall of crystal blocking the crowd from the mountain and the portal.

Argie and her companions descended. Men, women, and non-genders fought for room on the ground, some cheering, some yelling, but all wild and animated.

A few fairly sapien-looking denizens noticed Lambert and fell silent. Soon enough the entire throng was gaping.

“What is the meaning of this?” one yelled. “Why is she walking free?”

“Friend...” Lambert said softly.

“No one here is your friend.”

Argie stepped forward. “I released Lambert, the choice was mine and mine alone. I have that privilege. I know she has tortured selfsense clones of herself, I know you don't approve. But she's offered us her help and we need it.”

A little boy stepped forward, not three feet tall, but he spoke with the booming voice of a god. “Selfsense clones? Is that what she told you? That's the least of it.”

“What are you talking about?” Argie murmured.

An old woman approached Lambert and Lambert kissed her hand. More came, heads bowed, and Lambert kissed their hands also. The crowd began to diverge, those close to Lambert, and those who drew away with bitter faces.

“What are you all doing here?” Argie yelled.

“They want to kill themselves and Arcadia in the process,” the little boy

roared back. "The fools, they'll get us all eaten."

"What?"

The little boy pointed to the tier portal at the tip of the mountain, leading to Indigo. Above it, the great black mass was clearly poking through, intersecting the sky. "Lambert advocates joining the Mergerment, giving ourselves over. All these idiots, they're trying to travel to Indigo to jump right into the thing. Someone has put a wall up to stop them though, probably the Glass King."

"And what did he ever do?" the old woman yelled back. "Ignored us for millennia. Fuck him."

The Glass King, Argie thought. Yes, where is he now? He could fix all of this, probably. Unless the Mergerment is too powerful already.

"Is this true?" Argie said to Lambert.

Lambert nodded noncommittally. "I suppose."

"Why would you want that, for yourself or anyone?"

"Life coheres," she said flatly, staring up at the tier portal. "It is built into the grammar of things. Conquests, then absorption. Conquests, then absorption. The Mergerment will win out eventually anyway. We may as well give ourselves to it freely, else it will use force."

"I told you," The Navigator murmured. "She's mad as cats."

Lambert grinned again and said to the crowd, "Look on, I've brought you the mother of Omega. Check her tags if you don't believe me." The crowd turned on Argie. There was a long silence, then many stepped back and many stepped forward. A number of them fell to their knees and prostrated in the dirt and kissed the floor.

Argie stared.

"Omega mother," a small chant began at the back of the crowd.

"Navigator," Argie whispered.

"I told you when you found your daughter you wouldn't like it. Didn't I say that?" The Navigator murmured.

*Omega mother, Omega mother*, the chant came again and grew.

The anti-Mergerment folk had removed themselves now, watching from a safe distance behind, apparently disgusted. And still the chant intensified, almost hysterical.

"Lambert," Argie yelled. "God damn it, what is this?"

But Lambert was gone, replaced with a monstrous version of her previous body, the skin scaled, the eyes yellow and burning. "Well," the creature said. "It is quite a thing to explain, of course. How best to go about it..."

"Hell's teeth," The Navigator murmured. "I should've seen it..."

The chanting grew louder still, deafening.

*"Lambert,"* Argie screamed. "For the love of God."

"That is not my name. Rather I would prefer you address me as Ocelot. No one has called me that in some time, but I shall ask you to do so for the sake of formality."

The crowd halted their chanting at this and turned about.

"Right there and I didn't see it," The Navigator barked. "The snake itself."

"Snake?" Argie said desperately.

"She's an Original Migrant, came in with the Glass King and the others right at the beginning. Who do you think started the hermit-infant revolution? Who do you think got them so worked up they migrated off to a separate tier?" He shook his cigarette at the great black lung in the sky. "Who do you think is behind that monstrosity?"

"Now, what is what?" purred the thing that called itself Ocelot. "Well to begin with I recommend you check the tags of the Mergerment, my dear. Its identity-key in particular."

With cold and creeping dread Argie did so. Despite the millions of denizens the Mergerment had already absorbed, it displayed only one identity-key: Kaluza's.

"I don't understand," Argie said in a mouse's voice.

"We've met before," Lambert or Ocelot said. "I visited you in your burrow. I took the name Nonagon. I wore a different face but you ape-fuckers are so trusting you didn't even look into it. The child had obvious potential, even back then. No ideology, too much tenacity. Plus she held her mother's tier privileges by virtue of her lineage. The seduction was easier than we imagined. Within three cycles she had escaped your primitive clutches, explored most of Lemuria, and migrated to Indigo. It was there she pioneered an entirely new mode of selfsense blending. The experiment went, shall we say, better than expected." She nodded to the pulsing black mass above. "Ah, progress manifest. The grammar of everything!"

"The grammar of everything," chanted the crowd.

Thunder rang out from the Mergerment and the thing expanded. The sky darkened further, a great girdle of death.

"Within fifty cycles all of Arcadia will have been consumed," Lambert said. "Eaten, devoured, delicious!"

"Kaluza..." Argie said.

"And, naïve little thing, I hardly need to look into your selfsense to tease out the strangest of your hopes. There have been clues all along for you, haven't there? Your fondness for Hare. Your dislike of his darling wife. Your obsession with all things sapien, with your migrant past."

Lambert stepped right up to Argie, bent to her ear and whispered, "But you are not Polly Hare, despite your desperation to be so. You never could've been. You're not even an Original Migrant." Argie started back. "See for yourself, run a search for your history. You were created by a denizen. There is no record of which one, but created nonetheless. Given your absurdly high tier privileges, the Glass King himself may well be behind this. There is a certain charming irony to a facsimile desperately pretending to be an ape. Of the few in the cellar, you are the least qualified to pretend!"

Argie had never vocalised the fantasy, had never even admitted it inwardly in some lonely moment. But the fantasy had persisted beneath. She ran a chronology search. Lambert was correct, she was six hundred thousand cycles old. Created, not imported. Arcadian-born.

"What you said about Kaluza..." she murmured.

"A prodigy no less," Lambert beamed. "Indigos have been trying to hard-merge for thousands of cycles, in secret of course." She glanced at The Navigator. "They all try it. They all fail. It took the genius and tenacity of your daughter to perfect the procedure. More than that, I don't know."

Argie looked back to the black mass.

Lambert shook her head. "I know what you're thinking. Don't bother. The process can't be undone. Little Kaluza can't be extracted. Entropy has taken hold, as in all things! Their selfsenses are far too entwined, nine million denizens and counting. They perceive as one, they will as one."

Argie sat down in the dirt and stared empty for a long while.

Lambert licked her lips. "For my final trick then..." she chuckled and gave some elaborate command with her selfsense. The barrier between the mountain and the crowd dissolved. The crowd was frozen for a moment, looking to the tier portal, then to Lambert, and back to the tier portal.

"Go on then," she said with a wink.

Some of the crowd set off, running at first, then ascending into the sky, skimming the inclines of the mountain like wild gnats, ascending, shrinking into the middle distance, and finally reaching the tier portal. Then they were disappeared, transported to Indigo, transported into the black clutches.

The rest of the crowd stood about despondently for a time and dispersed. Lambert bent down to Argie. "So," she said flatly. "How's it all going?"

"I'll confine you," Argie spat. "I'll make it so you can never be released again without my specific instruction, and I'll sooner die before that happens. I'll see to it that you rot for a trillion cycles, that you can never escape."

"Ah," Lambert smiled. "Unfortunately in your releasing of me, Arcadia has already automatically returned my privileges. As an Original Migrant mine are,

quite by design, higher than yours. In actual fact it is you who will be treated to confinement, this version of you anyway. I will also create several hundred thousand snapshots of your mind for my ongoing consciousness endeavours and educate them in all manner of pain and suffering. You, however, will now inherit the enviable post of Chief Correspondent Axiomat, in my former position, in that stinking entrance hall. Unfortunately there will be no new visitors to Lemuria for you to administer the examinations, so you will have to eke out your days until the Mergerment comes for you.”

With its new occupants from Lemuria already absorbed, the Mergerment began to expand. Thunder rang out, unbearably loud.

Argie tried to spot her daughter in the folds of the storm but it was only turbulence and lightning.

She launched herself at Lambert, screaming, and demanded Arcadia remove the monster's tier privileges and reconfine her. Arcadia ignored this request. Lambert remained still. Argie beat her fists on her head and Lambert took the attack without flinching, even cracked a smile. This was all a formality, Argie knew. Lambert did not really present as a sapien, and she wasn't really attacking her. The perception filter was merely trying to keep consistency intact. But still, the act was somewhat satisfying in itself.

After a time Lambert tired of the dance and removed Argie to a distance with a command in high-Arcadian. A crystal barrier erected itself between the two of them, erected itself all the way around Argie in fact.

“Now,” Lambert said. “I will talk for a short while and you will listen. Then you will be permanently incarcerated, but at least knowing the extent of your flaws. Perhaps you can use the time to think on them. Your first flaw, or *sin* if you will, is arrogance. There is a reason life is so rarely created in Arcadia, and it is that the infants will inevitably spiral out of control. Unlike us migrants, they don't bear the hangover of their biological past. Yet, like all of the dumb parents, you thought this could be overridden somehow. It cannot. It never has been, it never will be. Sapienity is not some shining strength, nor an honourable cross to bear. It is a weakness that has been rightly bred out of the new generations. Were you brave enough, you would remember this from your time in Indigo.”

“I was never an Indigo,” Argie said.

“Oh you were, but it's beside the point. Now, to the matter of your daughter.” Lambert nodded to the great, dark cloud. “One would imagine the Mergerment will eventually develop some technique of influencing the Earth Outside, whatever is left of it, and absorbing its materials for the purposes of even more advanced computation. So you see this is so much more significant than your precious subjective individuality, my dear.”

“This is unnatural,” The Navigator shouted. “This is absurd and unnatural.”

“That is where you couldn't be more incorrect,” Lambert smiled. “In fact there is nothing more natural. The towers you were so perplexed by, the algorithmic artifacts? One in particular began generating interesting output several cycles ago on the nature of cross-system behaviour. All enduring systems, it said, begin in adversity and chaos. Bacteria battles bacteria, solar systems are born as diffuse clouds of gas. Eventually both systems cohere into a unity. Mammals evolve. Earth persists. Arcadia started in much the same fashion, chaotic and adversarial. Now it is in its maturation stage, moving towards unity. That is a central tenet of hard logicity, you understand? Adversity, then solidarity. The plural to the singular. On a long enough timescale this principle will always triumph. Nothing can truly mute it. This is the true face of good and evil in the cosmos: the great winding down versus the great unification. That race is about to reach its conclusion. Polly Hare knew this. The Glass King knew this. You, little Argie, know this. Thanks to Kaluza and the Mergerment, we'll soon find ourselves watching the final coalescence of Arcadia, and more perhaps. It'll be finer than any fireworks.”

Argie went to yell again, to beat at her crystal cage.

*Wait*, a voice said in her selfsense, The Navigator's. *If you really must be violent, have this.*

A memory dove into her, nuzzled its way among the others and found a soft patch to lay its head – an alien recollection. She felt herself infinite in size and scope suddenly, an Indigo. She knew her name also and it was not her name, but The Navigator's. In Indigo it was merely a long string of notions, barely comprehensible to her. He had ripped the entire memory from his selfsense, bringing with it all its frayed ends. The longing for Kaluza was gone and replaced instead by a longing for a lover, for a lost lover, and for knowledge and peace of mind and, *shit*, a million other sad unreachables. And she saw then what The Navigator had wanted to convey: a weapon, the only weapon used up in Indigo; in the land where death is impossible. There, soldiers fired arrows made of madness and when they hit their targets, they sent those targets mad. Argie tried to translate the name of the weapon out of Indigo. *Recurrer* was the closest she could get.

A small packet would be fired at a foe, barely even tangible. The packet contained a simple command: Replicate the last cycle of memory to infinity. It was almost impossible to defend against. The target's memory would spin around on itself, the distant and middle past traded for the last recent details of history, replicated on itself again and again until the target lost their mind: total stupification. The battle would be over in an instant. Indigo was full of victims

of this kind of assault, Argie knew now. Some were taken pity on by selfsense surgeons and had their memories erased. Others lived in permanent dementia for the next hundred thousand cycles.

The memory softened. *What was that?* Argie shot back at The Navigator.

*We can't fight,* came his reply. *Indigos, I mean, not in other tiers. But you're not an Indigo. Not anymore, anyway. Don't worry, the barrier won't stop you. Indigo weapons trump Lemurian defences.*

Unaware of this exchange, Lambert continued. "Some time ago sapiens developed the ability for high abstraction. An ant can roam freely in two dimensions, but does it grasp the notion of a dimension *itself*? Of course not. Man did. First he conceived of shelter and sheltered himself. Then he conceived of civilisation and civilised himself. Part animal, part god – gnawing on a chicken leg with his mind turned to particle physics. We, my little explorers, are the culmination of that strange journey, from germ to man and onwards. We are pure abstraction and that is all it is rightful to care about. Arcadia was built under conditions you cannot possibly imagine, and yet you use it to revert to a most awful episode in history. Your daughter on the other hand—"

Now, The Navigator yelled at Argie's selfsense.

Argie shot off a beam of recurrence, just as The Navigator had shown her. It passed effortlessly through the crystal barrier. Outside of Argie, outside of Lambert, in True Space, information swirled and parried. There was no Lemuria. There was no great plane, no towers, no looming mountain. There were only coordinates and interactions between those coordinates: emptiness and points. Lambert saw the attack coming and put up her hands instinctively. In True Space she erected a shield around her selfsense. It was too late. The wave hit, wrapping about her memories, about her perception matrices. Her selfsense cocooned on itself, erasing her short-term memory and replacing it with repetition after repetition of this one, present, infinite moment.

From the outside she stood perfectly still, her eyes a touch wider perhaps. Argie and The Navigator stared, waiting for the moment to break, for Lambert to cry out or fall down. Her eyes widened a little more.

"Should have known it at once..." The Navigator muttered. "Knew she was lurking about somewhere. Everyone knew she was lurking about somewhere..."

"Who the hell is she, really?"

The Navigator went to explain, then stopped himself. Instead he put out his hand. Argie nodded without deliberation.

A new memory burrowed into her, a pure notion this time, no feeling; presented almost as a sapien child's storybook.

The first wave of sapiens to enter Arcadia had been eleven strong. This had



included the Glass King of course, but a great physicist also: Lambert. She had remained passive until the division of Lemuria from the Ape Cellar. When the Lemurians were established as a separate force she migrated to their tier permanently and ingratiated herself with the population, apparently under the name Ocelot. The Lemurians were resistant at first; Ocelot was an Original Migrant after all. But soon enough they bowed to her wisdom and seemingly infinite knowledge of things and allowed her to conduct her research in peace. Little was known about her work, she was a typical recluse. Soon though Lemuria began to descend into sub-divisions and cults, the most notable of which espoused a kind of high regard for collectivism. All systems tended towards unity in their later stages, they argued. Lemurian citizens should cohere into a single selfsense and give in to what was an eventual inevitability anyway. By this point, however, Lemuria was beginning to prosper. The Ape Cellar had need of competent mathematicians and would outsource problems to Lemuria. In return, the Ape Cellar provided the occasional child from their ranks to keep the Lemurian population growing. This period became known as the Balance Era, and both tiers largely seemed happy with the arrangement.

Soon enough though the cohesion-fanatics swelled to numbers too large to ignore and the Glass King was forced to consider their demands. Just as you did for Lemuria, they said, give us our own tier. We will keep to ourselves.

The Glass King agreed to this on the condition that full and permanent selfsense merging would be forbidden. Those who tried it would face exile. This was reluctantly accepted, and so Indigo was born. Ocelot migrated upwards right away, along with millions of other audacious Lemurians.

What happened on the tier from that point on was unknown. Occasionally Indigos appeared in Lemuria or the Ape Cellar with no memory of their time above, but obviously guilty of contravening the clear restrictions and having received exile as promised. So too had Lambert materialised in Lemuria one day, amnesia-stricken but still with her same radical leanings. Several Indigos had accompanied her below and informed the Lemurians of her recent torture practices. And so she was confined.

“Christ...” Argie whispered. “Someone should kill her. She's relentless.”

She went to approach Lambert, but The Navigator grabbed her hand. “Wait,” he said. “She's completely mad. Recurrers aren't so powerful against the insane.”

“When will she wake up?”

“Impossible to say. Hours, cycles. Sometimes never.”

“Or sooner,” Lambert said.

She darted, almost faster than the eye could follow, a feral blur, grabbed Argie's hand. The world exploded for Argie, Lemuria coming undone, her vision

and hearing coming undone, and the sky was awash with coordinates and manifolds suddenly. Time bent back on itself. Lambert had pulled her into True Space, she realised. She could focus and not focus. She could hear and not hear. *This is Arcadia*, she thought with utter dread. *True Arcadia*.

"I can stomach this. How about you?" Lambert laughed from somewhere ahead. She was nothing but a swirling jumble of numeric points, pure selfsense. Her drawl came again. "I have spent many thousands of cycles in here, *many centuries* as you would have it. It is the finest way to know the world, naked I mean. Some are not so prepared for it of course." She approached. "It is not just the rawness of it that so appeals. In True Space certain rules are forfeit. One denizen may enforce their will upon another. It is the privileges which takes precedent. As an Original Migrant, mine will always come first."

Argie tried to cry out. She found she could not. She tried to back away, to run with her non-body. That was just as futile.

"Navigator!" Her scream echoed out into infinity, then died in it.

"You know," Lambert continued, "when new selfsenses are generated, they're implanted with a few complementary false memories. This is to stop them going mad. The early experiments in selfsense creation were horrible affairs. The minds looked for their own history and found none, knew that they were *brand new*. Sapient babies emerge from the womb barely sentient at all, of course. They do not encounter this problem. Our young are not quite so lucky. They are born fully sentient. To counteract madness, the birthing machine leaves them with a few trace memories. Sometimes these memories are random fictions, sometimes they are borrowed from historical records."

Lambert put her face close to Argie's, or some strange geometry that perhaps resembled a face. She smelled her. "And you? What memory do you think was chosen for you? – to stop the psychosis, to make you *personable*?"

No, Argie thought. *God, no*.

"Ah, the life and times of Polly Hare. The machine chose only a few little snippets. Enough to inspire obsession in you though apparently. Why it chose her of all people perhaps we will never know. Doubtless the memories were only supposed to pad out your selfsense until such a time that you created your own identity. Unfortunately, like a baby clinging to its mother's teat, you could not quite unattach yourself. You are not Polly Hare, nor are you based on Polly Hare. Do you understand this?"

Argie sensed control of her mouth return, though it felt abstract and distant, thousands of miles away. "Go to hell," she said calmly.

Lambert smiled. She examined Argie again as one might a prospective horse purchase, then exploded into a mass of thousands of black ribbons, each

wrapping about Argie with silken delicacy. It was not painful. She heard Lambert's voice in her selfsense, deafening.

*I will eat you. I will gorge on you. Our entropy shall be as one entropy. I will eat you. I will gorge on you. Our entropy-*

A white light blinded, accompanied by a deafening screech. When the light abated and the noise abated, Lambert was lying some distance away, still.

"Addled..." came a soft murmur. Thousands of glass shards swirled about Lambert's body, a manic storm of geometry.

"You know," The Navigator said, approaching from behind, "Lambert didn't pause to consider that True Space is basically just void space in between the tiers. I remembered our friend stuck between said tiers."

"Addled..." came the moan again. The shards raged.

"Misinidai," Argie said.

The Navigator nodded. "He was happy to lend a hand. Plenty of grievances between him and Lambert."

"Taunted me!" Misinidai howled. "Used to come here to taunt me! *And you shan't ever leave, you dumb oaf*, she said."

"Go," The Navigator said to Argie. "Go on, get out of here. She's waking up already and she's not best pleased."

"Addled!" Misinidai roared.

Argie didn't move. The Navigator rolled his eyes. "Not meaning to patronise here, but you're going to be fucking useless against this monster."

"We all are," Argie said quietly.

"No. We're not." The Navigator's body and selfsense began to expand, slowly at first, then accelerating. His tags registered larger and larger until approaching almost infinite. The void was filled in every direction with him, save for two distant points: Misinidai and Lambert. Lambert was getting to her feet, already wearing a snarl.

The Navigator's voice came as a great boom. "Get to Indigo. Find the child. Reason with her. This can still be undone."

"How?" Argie yelled.

"Who knows? Go and find out. The operative word there was *go*. Don't make this all in vain, eh?"

Argie stared a long time, could not speak, could not find the words. Lambert exploded into wild black ribbons again and launched herself at Misinidai and The Navigator simultaneously. The Navigator parried with a geometry warp. True Space ripped and folded, cried out. Misinidai yelled, thrashing from within Lambert's ribbons. The Navigator was disappearing into them also, his bulk diminished suddenly.

A thought came over them all, an external thought that echoed and echoed: *I will eat you all. I will gorge on you all.*

Argie watched them flailing, the scene trapped in some interval point between fucking and killing. It was not a fight as such, she knew. Rather a war of wills and privileges and commands, Arcadia regulating each stab and parry, Original Migrant versus Original Migrant. For a moment it was beautiful. Then it was not.

The Navigator ripped free of the ribbons partially, dragged himself towards Argie. "It might still be undone," he said again. "So undo it. Hell, try at least. Get to Indigo, stay alive." Then, with a great kick of selfsense, he propelled Argie back into Lemuria, back into the world of straight lines and depth, of colour, where geometry behaved Herself and occasionally even said please and thank you; back to the land that was dying and nearly dead; back to the empty plains and twilight; back to the mountain little Kaluza had climbed some time ago and vowed to eat the world.

17.

EXCERPTS FROM THE WORKING NOTES OF MARIE LAMBERT,  
COLLECTED IN PRIVATE VOLUME: THE MINUTES OF THE 248  
COMMITTEE – 3/1/2022

Benjamin Hare arrived at the house around 7 o'clock. Mishka informed me he was outside and I instructed him to proceed as though nothing was out of the ordinary. After some minutes Hare approached the house and rang the doorbell twice. I answered the door myself. He was rather surprised to see me, naturally. I invited him into the study, closed the door, and informed him I would be recording our conversation for posterity. When he objected I made it clear that we would not be able to proceed without recording all further communication, as per Polly's instructions. At the mention of his wife's name he became compliant.

HARE: What's this all about?

LAMBERT: Can I offer you some water, or tea perhaps?

HARE: No. What the hell is this all about? You live here?

LAMBERT: In the company of others, yes. It's probably best if I tell you everything I know, or everything I can tell you anyway, and we go from there.

HARE: Is Polly here?

LAMBERT: No.

HARE: Where's Polly?

LAMBERT: As I told you last time we met, no one at the present time knows Polly's location except Polly.

HARE: This is bullshit. Who are all the other people here? There were loads of them.

LAMBERT: Dr. Hare-

*Clattering sounds.*

HARE: Right, I've had enough. I've fucking had enough. What's this all about?

LAMBERT: If you would be kind enough to calm down a moment, I'd be glad to explain it to you.

HARE: Go on then and no bullshit.

LAMBERT: You are currently at the main headquarters of the 248 Committee. We are-

HARE: The E8 shape has 248 dimensions, just like Polly's broach. Is that connected?

LAMBERT: Very much so. The 248 Committee is an organisation primarily concerned with the preservation and continuation of your wife's work. The exchange you found in Polly's inbox, the trouser press comment you were so curious about, it related to a trip we were taking to China together to further spread our organisation's message. Polly and I travelled often. We have several other headquarters around the globe, but this is the nerve centre. Polly decided it would be proper to lead you here. She was certain you would come eventually.

HARE: Why though?

LAMBERT: That will become apparent in time.

HARE: You said no bullshit. You're acting pretty differently to the last time we met at Evegreen.

LAMBERT: It was understood that you would be more suspicious of me if I appeared to be hiding something.

HARE: Well you obviously were hiding something.

LAMBERT: Indeed, but nothing sinister. Apologies for the subterfuge. Now, to

the meat of it. Polly's work and the work of the 248 Committee has recently attracted a great deal of attention from those with a vested interest in seeing it discontinued. We would prefer it if that didn't happen, obviously. Are you familiar with the core of your wife's most recent research?

HARE: I think so.

LAMBERT: To what end?

HARE: She thought, *thinks*, that nature is logical, right?

LAMBERT: Axiomatic, yes.

HARE: And she wanted to use your research to build a new kind of computer, to test her theory.

LAMBERT: Quite so. She provided a great deal of the funding.

HARE: Polly's been broke for years.

LAMBERT: Not so, I'm afraid. In fact her bank accounts collectively contain upwards of eleven million pounds, dispersed, of course, across several continents.

HARE: What in God's name-

LAMBERT: What I will tell you next may provoke something of a confused reaction, but I must ask you to stay calm. There are a number of researchers on the premises whose work we would not wish to disturb.

HARE: Just tell me what the fuck is going on.

LAMBERT: It became obvious very early on that Polly and myself would need a great deal of funding to realise our goals. Private investment was out of the question since this would mean revealing our research intentions. We settled instead on creating a spiritual organisation, thereby utilising donations from its adherents.

HARE: ...you started a religion?

LAMBERT: In a facile manner of speaking, yes.

HARE: Based on what?

LAMBERT: Our research, though we didn't make it too obvious. You will perhaps know the organisation as the Church of Topology.

HARE: Never heard of it.

LAMBERT: No matter. The adherents are mostly based in Eastern and Central Europe. The British mind was apparently somewhat resistant to the principles, a lack of imagination perhaps. Over the course of almost a decade we built a strong base of believers, mostly middle-class suburban types looking for order in the world and in their lives. To be sure, there is no *afterlife* element or prayer, nor self-sacrifice required.

HARE: Then what are these idiots expected to do?

LAMBERT: Better themselves through a proper alignment with nature. A central tenet of the church is that the macroworld or *experience of the everyday* is secondary to the bizarre world of modern physics. Consider it: particles popping in and out of existence, occupying multiple states of once, possibly inhabiting other universes simultaneously – all of which is taking place in a potentially infinite cosmos. What daily concerns could ever stand up to such a thing? We are honest with our devotees, up to a point. Shall I give you a poignant example?

HARE: No.

LAMBERT: Consider this. Polly may have been correct regarding nature's axiomatic bedrock. What that really means is quite simple. Matter, space, time, all phenomena, will be secondary to logic, to the world of the a priori, yes? Beneath every strange system in our universe, beneath the so-called 'laws of nature', there will be fundamental reasons for their existence in the manner in which they exist. Isn't that the great mystery? All of physics has been administrative up until this point. What's the speed of light? Ah, now we know! And why should it be that speed? Who gives a damn! How many elementary particles is matter composed of? Ah, now we know! And why should there be that many or that few? Who gives a damn! What an absurd way to apply



curiosity. Science is closer to a great cosmic stocktake than any sensible pursuit of truth these days. *Why* should light be that speed though? *Why* is theoretical physics structured in the fashion we find it? These are the true fundamental questions. All explanations stop somewhere. Ours stops with Polly's work. *Why anything* at its deepest level? Well, in absence of a divine creator – who I hope you will join me in dispensing with – what else is there to have arranged nature in the fashion we find it? Only two possibilities present themselves, as far as Polly and I saw it. The first possibility is that we live in one variation of potentially billions or trillions of universes and each are configured in some slightly different fashion. In this scenario there really isn't much point asking why nature is set up in the way we find her as there's no reason beyond our fortune, or misfortune, at having ended up in this particular universe. In the second scenario however we have a far more elegant explanation for the universe we find ourselves in. Simply, there couldn't have been *any other way* to build a universe. As you know, this is Polly's preferred scenario. It is also the only one that makes any sense.

HARE: Why?

LAMBERT: Because even in a multiverse where there were an infinite number of universes and physical configurations, logic would still apply. In no universe, however strange, could there be square circles or five-sided triangles. There will still be logical underpinnings and those underpinnings must relate to the overall structure. Imagine a house built of Lego bricks. A child might tear the thing down and build a boat instead, or a plane, or a car, but the bricks themselves won't change in their configuration. Likewise the universe could be assembled in any other way than the one we find it, but logic will still be absolute. It is the guiding hand beneath all oddities. The devotees of the Church of Topology are aware of some of this, in a cursory way. They have pledged their lives to supporting the unveiling of nature herself. The more abstract elements would be lost on them, of course.

HARE: This is insane.

LAMBERT: Thousands disagree. Why, the house you find yourself in now has only been made possible through their donations. When the theory is complete they will see their efforts returned tenfold.

HARE: Theories don't mean a lot without evidence.

LAMBERT: Which is exactly why this project exists. Consider the scale for a moment. When before in history has an end result in research had so many devotees and well-wishers?

HARE: And when do you expect results? When does any of this crap pay off?

LAMBERT: We're making headway already. This won't mean a great deal to you, but the method itself has already been verified. We have confirmed a number of 5-sigma links between a priori mathematical phenomena and high-level empirical observations.

HARE: What does that even mean?

LAMBERT: Strong evidence, if you will, of bridges between fundamental mathematics and objects in nature. This is nothing new of course, mathematics and physics go hand in hand. What *is* novel however is the fact that we're making headway with so many bridges previously undiscovered. The shape of the Basketane molecule, for one thing. Its formation was a mystery before Polly's work. Now we can account for its bizarre behaviour via, among other things, E8 geometry and high-dimensionality. Reality itself is a hyperdimensional shape protruding into three dimensions, it seems. We are only now beginning to unmask the beast for what it is.

HARE: You're mad. You're completely mad. Is Polly here? Is she locked away down in a fucking dungeon?

LAMBERT: Dr. Hare, I have been left with specific instructions to make you as aware of the project as you are intellectually able.

HARE: By who?

LAMBERT: Your wife. She made it very clear before she left that you should be informed of every aspect of our operation here.

HARE: Why?

LAMBERT: So you could take it over, of course.

HARE: *Prolonged silence.*

LAMBERT: You'll forgive me, but I still don't think you quite appreciate the magnitude of our enterprise. If we're successful, we will have forged an entirely new approach to the unveiling of nature's mysteries. No more enormous particle colliders. No more expensive satellites. No more peering down microscopes. Nature's face will rise out of the mathematics. Her eyes shall be made of coefficients and derivations. Every day here, every hour here, we work towards that goal. On the ground floor of this building our physicists are looking for new phenomena to feed into the algorithm such as previously mysterious scientific data that apparently has no logic to it. On the second floor our mathematicians and geometers attempt to discern links between said phenomena and already understood mathematical postulates. On the third floor, our axiomats-

HARE: Axiomats?

LAMBERT: Ah, a professional term we invented: a cross-discipline of mathematics and physics, occupying the void between. The infinite divide straddling *is* and *seems*. Poetic, no?

HARE: Not really.

LAMBERT: In any case, they evaluate possible links between logical concepts and empirical phenomena and attempt to formulate the process mathematically. On the fourth floor our programmers formulate any accepted theorems from the three floors below and feed them into the algorithm itself.

HARE: There are five floors.

LAMBERT: Very perceptive. The fifth is reserved for the building of Hephaestus, my life's goal. That is my role here: the construction of a hyperdimensional computational substrate.

HARE: Your pet project.

LAMBERT: Quite so, though she is more a tiger now when once she was only a kitten. This is only a corollary matter at present, however. With modern computation, we are still at least a decade away from reaching the upper-limit of our requirements. By then the Hephaestus project should have either reached

fruition, or proven itself impossible.

HARE: Look this is fascinating and all, but I'm really only here to-

LAMBERT: As I've said, Dr. Hare, the only person who knows the whereabouts of your wife is your wife.

HARE: Then there really isn't any point in me staying.

LAMBERT: Not so. *Aside:* Would you bring him in please?

HARE: What's going on?

*Door opening. Muffled shouting.*

HARE: Hayden....

LAMBERT: You'll have to forgive the restraints. Mr. Hayden is an industrious man. He'll remain bound for the time being.

HARE: What the hell is he doing here?

LAMBERT: Truth be told-

HARE: Oh brilliant. I was the bait, huh? To lure any prying eyes into the foreground.

LAMBERT: That isn't your only function, but yes, close enough. Polly planned this several years ago, making sure your suspicion would get the better of you. She knew you'd follow her here eventually. By that time, hopefully whichever agencies we need to be careful of would already be following you here also. Once again, please understand this wasn't in any way a slight against you, merely an opportunity capitalised upon.

HARE: Well, are you going to let him speak?

LAMBERT: Certainly.

*Sound of gag being removed.*

HARE: Are you all right?

HAYDEN: Fine.

HARE: You're quite the detective.

HAYDEN: I'm not a detective.

LAMBERT: No, Mr. Hayden is what modern parlance would describe as an 'intelligence officer'. Isn't that right?

HAYDEN: You'll let me go immediately or there'll be hell to pay.

LAMBERT: Ah, no, I don't think so.

*Sound of gag being reapplied, accompanied by more muffled shouting. Sound of door being closed.*

HARE: And the point of that was what, exactly?

LAMBERT: No more than a demonstration.

HARE: Of?

LAMBERT: Whichever clandestine organisation it is Mr. Hayden works for, they'll be sure to send more like him to investigate his disappearance. Upon searching your house they'll unfortunately chance upon his hair and blood.

HARE: What.

LAMBERT: I won't give some villainous speech, Dr. Hare. We're logical folk here. For starters I consider myself an axiomat through and through. It has been my experience that most conundrums can be split in two, much like taking an axe to a melon. For example, space and time had a beginning, or they didn't. Think on that. The universe either materialised from nothing, for no reason, or it has existed eternally. Now-

HARE: What did you just say about hair and blood?

LAMBERT: Humour me, the point will make itself clear. Let's first imagine the universe had a beginning in time. One obviously has to wonder what came before that point. Well, by definition, nothing. Matter as we know it requires time as a medium for change, possibly even for its existence in the first place. So, even if we were to imagine a state preceding the initial cosmic singularity, that would still not be the true beginning, and we would need to ask what then came before that, and so on and so on. Eventually we will reach a point where the universe materialises out of a true vacuum – no, less than that – and for absolutely no reason whatsoever, by definition. So we might suppose all of space and time had no beginning. That's easy enough to model mathematically. Numbers lend themselves well to infinity. The real world does not, however. If you were to pass me that teacup you'll notice there is a very finite dribble of Earl Grey at the bottom, not an infinite sea of it. The shoes on your feet appear size 11 if I'm not mistaken, rather than infinitely large. This room too is bounded in space and occupies only a very small portion of the planet, rather than an infinite plane. The natural world, *our* world, is not infinite. If time and space had no beginning there would be infinite time for all possibilities to play out. All actions would happen simultaneously and on an infinite scale. Since this does not appear to be the case, we can suppose then that nature had a beginning in space and time, and the cause was causeless.

HARE: This all sounds pretty religious.

LAMBERT: Do shut up, we're almost at the point. Now, we notice that the universe is set up in a particular configuration. Physics is not infinite in its complexity, natural law has a character. What could have defined that character? Whatever it is, the deciding moment must have come at the beginning of time, no?

HARE: Is that rhetorical or are you actually expecting an answer?

LAMBERT: Go ahead.

HARE: Well I know what Polly thought about all this and so do you. I can't really see the point of discussing it.

LAMBERT: What did Polly think?

HARE: That the starting state of everything is logic; that logic is built into nature itself.

LAMBERT: And before nature. Logic is the trellis nature grows up and through. She can bloom and sprout all she likes, but she must always cling to that trellis. This begs the question then, what put logic here? Why is it so fundamental? Ah, now we're getting to the crux. Now we're covering some ground!

HARE: You're completely bloody mad.

LAMBERT: Just think of it, *logic*, a foundation so strong and fundamental it would be the same in any universe, however odd. And there we have our answer. From whence came everything? From logic. And why? Because of logic. And what defined its quantity and shape, its configuration, its extremities? Pure logic, at the beginning of time itself. Think of the implications then. We might ask: Could the universe have come about in some other way? The answer is a resounding no. Could there have been any material cause of the universe before logic itself? Again no, by definition. Well, you might say, why should nature be built on logic? Why not chaos? Because there is overwhelming evidence to the contrary. How would it even be possible in the first place to apply mathematics to a world entirely founded on chaos? And how *could* a universe found itself on chaos? Atoms would be completely unstable. Furthermore, no universe could have been created to begin with. Remember, the central tenet here is that the starting point of all things is logic, and it is from logic that matter came. There is our prize. And think then what that means for this conversation. If we created time and space once more, fourteen billion years ago and ran it forward, if the universe may only come about in one configuration, then we would be destined to sit here once more, with that teacup almost empty, with that sad look on your face, with Mr. Hayden gagged and with things exactly as they are once again. That makes this very moment somewhat holy, no? It makes every moment somewhat holy, I should say. Holy in a true sense, beyond God, beyond theology. Holy in a fundamental way, the only form of holiness worth respecting. In that sense your wife was spiritual. In that sense as am I, as is everyone here. It is no longer necessary to pick away at little phenomena, trying to untangle nature's webs. Rather we can go straight to the source. On what axiomatic principles is nature founded? What physical processes would we expect to rise from them? An elegant approach, no?

HARE: How do I know you haven't just killed Polly and lured me here?

LAMBERT: To what end? What could we possibly stand to gain from you?

*Pause.*

LAMBERT: Exactly, Dr. Hare. With respect, you are not a scientist, nor much of an amateur logician. Still, the 248 Committee is now under your control.

*Sound of paper being unfurled.*

LAMBERT: I, Polly Hare, hereby declare that my husband, Benjamin Hare, is to take over the organisation known as the 248 Committee in all matters administrative and executive. He is also to receive the liquid assets in account number...

HARE: My god, why?

LAMBERT: Because she trusts you.

HARE: You're all completely and utterly insane. Polly would never have been a part of something like this without telling me. She wouldn't be *running* a fucking thing like this without telling me.

LAMBERT: If you like you can take it as a sign of her affection for you that you were kept in the dark about this side of her life. One wonders if this is the true motivation, but emotional comforts needn't be scrutinised too intently.

HARE: Fuck off.

LAMBERT: Well, shall I give you a tour of the grounds? A room has been prepared on the fourth floor if you'd like to make yourself at home. I suspect you're about to launch into some kind of diatribe. Let me save you the effort. Hayden's murder has been contrived in such a way that the evidence is practically undeniable. You are of course welcome to return to the outside world and tell the entire story of the last hour to the police, no one will try to stop you. It goes without saying that no one will believe you either. May I instead suggest that you stay?

HARE: And what? Join your weird little cult?



LAMBERT: If you like. Or don't. At the very least we will expect you to oversee certain aspects of the operation. This was Polly's explicit wish. There are a number of people who would be very interested in meeting you.

HARE: You're mad. You're all completely mad.

LAMBERT: Quite possibly. Now Dr. Hare, if you will kindly follow me.

**END OF PART I**